

SEQUENCE LISTING

<110> Havukkala, Ilkka J
Glenn, Matthew
Grigor, Murray R.
Molenaar, Adrian J.

<120> Compositions Isolated From Bovine
Mammary Gland and Methods For Their Use.

<130> 11000.1046U1C1

<150> US 09/699,146

<151> 2000-10-27

<150> US 60/162,701

<151> 1999-10-29

<160> 262

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 801

<212> DNA

<213> Bovine

<400> 1

agtgcacgtg	tctggacggg	tcggtgggct	gegtgccctt	atgcagcgtg	gacgtccgcc	60
tgccagccc	cgactgccc	ttccctcgga	gggtcaaact	gcccgggaaa	tgctgcgagg	120
aatgggtgtg	tgatgagccc	aaggagcaca	ccgtgggtcg	ccctgcgctc	gcagcttacc	180
ggccggaaga	cacgtttggc	ccagacccaa	ccatgatccg	agccaactgc	ctgggtccaga	240
ccaagagagt	gagtgcctgt	tccaagacct	gcggaatggg	catctccacc	cgggttacca	300
atgacaacgc	attctgcagg	ctggagaagc	agagccgcct	ctgcatggtc	aggccttgcg	360
aagctgacct	ggaggagAAC	attaagaaag	gcaaaaagtg	catccggacc	cccaaaatct	420
ccaagcctat	caagtttgag	ctttctggct	gcaccagcat	gaagacatac	cgagctaaat	480
tctgcggagt	gtgcacagac	gggCGgtgct	geacccccca	cagaaccacc	acccttcccg	540
tggagttcaa	gtgtectgat	ggggaggtca	tgaagaagag	catgatgttc	atcaagacct	600
gtgcctgcca	ttacaactgc	cccggagaca	atgacatctt	cgagtcactg	tactacagga	660
agatgtatgg	agacatggcc	taaagccaga	gacagtgaga	cacgtgaaca	ttttaggctg	720
tcacttgaat	cgattcacat	ctcatttttg	tgtacacgtg	atttcagtgg	cacaagttat	780
ttaaatctgt	gcttctaact	g				801

<210> 2

<211> 511

<212> DNA

<213> Bovine

<400> 2

gtggagtcgg	ttgggccctt	ctcttggtga	cttttccagt	tcggcctttc	gaaacgtctg	60
cacgcggaaa	ccaaccgcca	ggaaagaggc	gcggcgtcga	gccagagctaa	cctgaggaaa	120
ccgctgccgc	tgcagccgag	cgcgtggggc	cgcgggggca	ttagtctgtc	tgcgcgcagc	180
cccggccccg	ctttccagag	ccatgagtta	cggtcgcccc	cctcccgatg	tggagggcat	240
gacctctctc	aaggtggata	acctaacctt	ccgcacctca	cccagacccc	tgaggcgctg	300
gttcgagaag	tacgggCGcg	tcggcgatgt	gtacatcccc	cgggaccgct	acaccaagga	360

gtccccgggc	tctgccttcg	tccgcttcca	cgacaagcgc	gacgccgagg	acgccatgga	420
tgccatggac	ggagccgtac	tggacggccg	cgagctgcgg	gtgcagatgg	cgcgctacgg	480
ccgcccccg	attcgacca	tagccgcgg	g			511

<210> 3

<211> 801

<212> DNA

<213> Bovine

<400> 3

agtgcacgtg	tctggacggg	tgggtgggct	gcgtgcccct	atgcagcgtg	gacgtccgcc	60
tgcccagccc	cgactgcccc	ttccctcgga	gggtcaaact	gcccgggaaa	tgctgcgagg	120
aatgggtgtg	tgatgagccc	aaggagcaca	ccgtggtcgg	ccctgcgctc	gcagettacc	180
ggccggaaga	cacgtttggc	ccagacccaa	ccatgatccg	agccaactgc	ctgggtccaga	240
ccacagagtg	gagtgcctgt	tccaagacct	gcggaatggg	catctccacc	cgggttacca	300
atgacaacgc	attctgcagg	ctggagaagc	agagccgcct	ctgcatggtc	aggccttgcg	360
aagctgacct	ggaggagAAC	attaagaaag	gcaaaaagtg	catccggacc	cccaaaatct	420
ccaagcctat	caagtttgag	ctttctggct	gcaccagcat	gaagacatac	cgagctaaat	480
tctgcggagt	gtgcacagac	gggcggtgct	gcacccccca	cagaaccacc	acccttcccg	540
tgaggttcaa	gtgtcctgat	ggggaggtea	tgaagaagag	catgatgttc	atcaagacct	600
gtgcctgcca	ttacaactgc	cccggagaca	atgacatctt	cgagtacttg	tactacagga	660
agatgtatgg	agacatggcc	taaagccaga	gacagtgaga	cacgtgaaca	ttttaggctg	720
tcacttgaat	cgattcacat	ctcatttttg	tgtacacgtg	atttcagtgg	cacaagttat	780
ttaaatctgt	gcttctaact	g				801

<210> 4

<211> 657

<212> DNA

<213> Bovine

<400> 4

tttccaccgt	acgccgggtg	tgggagtgcc	tgccttctct	tgtcttgaaa	acctcctctt	60
tggacccagc	accgccgtcc	tcacgggtgat	gttggactca	gtgacacaca	gcaccttctt	120
gccaacaacg	tccttctgcg	accccttgat	gtcgtggact	gacctgttca	gcaatgaaga	180
gtattaccct	gcctttgagc	atcagacagc	ttgcgactcc	tactggacat	ccgtccaccc	240
cgaatactgg	acgaagcgcc	acgtctggga	atggctccag	ttctgctgtg	accagtacaa	300
gctggagcgc	aactgcatct	ctttctgcca	tttcaacatc	agtggcctgc	agctgtgcgg	360
catgacacag	gaggagtcca	tggaggcggc	cggcgtctgt	ggggagtatc	tgtactttat	420
cctccagagc	atccgctcac	aaggttactc	cttttttaat	gatcctgatg	agaccaaggc	480
cacctcaaaa	gactatgctg	attccagttg	cttgaaaaca	agtggcatca	aaagtcaaga	540
ctgtcacagt	catagtcgaa	caagcctcca	gagttctcat	ctatgggaat	ttgtgcgaga	600
tctgcttcta	tctcctgagg	aaaactgcgg	cattctggaa	tgggaagata	aggaaca	657

<210> 5

<211> 1107

<212> DNA

<213> Bovine

<400> 5

gcaaagtgac	tcagttatac	ctatgcatgt	atctcttctt	tttcaaattc	ttttcccatt	60
tggtctgttac	ataattatga	aactataccc	ctgtctcaga	ctgctgcagc	ctgagttcta	120
atctaaccct	gcattgattt	catgctttgc	tttctgctct	tcataagctg	tagtcccttt	180
gcttttccct	gtgtcctttc	tgggtctgtt	tccacactag	ccggagggat	cttcttaacg	240
tgtggatctt	gtcaaagtct	tccgtcttca	cttggtgaat	aaaatccctc	gccatttctc	300
ggtgcccacg	tgacttgcca	gcagctagct	gcccccgagg	caacacctcc	cacctccct	360
agcacccgga	ggtcccctgg	gctttgcaat	gctgtctcct	ccctctgaaa	ccctctccca	420
cctcctgacg	ttagcatgaa	tgtgttcctc	taggagaccc	gctctgcccc	ccccatctag	480

atgcagcagg	agctttcgcc	tgctctcatt	ctctaattgcc	tccttccttc	gtaacactta	540
caacaggggc	gattegtgtt	tcacttgat	tttcctcacc	ctgtagtcct	cagcctetac	600
ctgagcgagg	accaagtctg	ccttggtctc	agctttctgt	ttccagctca	gaacctggaa	660
tctgacacac	agttgggccc	cagtgttgaa	tacaaattct	cctgaaacct	actaattatc	720
cccagaacag	ccggcaccag	ttgtctctg	ccacgaaggt	gtccaattaa	tagctgctca	780
tttggtgtga	cttgaggtct	gaatgtggcc	tctagatttc	ttcctgcagc	tgtcaatcac	840
tctgttgtag	atgctgattc	cagttgcttg	aaaacaagtg	gcataaaaag	tcaagactgt	900
cacagtcata	gtcgaacaag	cctccagagt	tctcatctat	gggaatttgt	gcgagatctg	960
cttctatctc	ctgaggaaaa	ctgcggcatt	ctggaatggg	aagataggga	acaagggtatt	1020
tttcgggtgg	ttaaatcaga	agccctggcg	aagatgtggg	gacaaaggaa	gaaaaatgac	1080
agaatgacgt	acgaaaagct	gagcaga				1107

<210> 6
 <211> 305
 <212> DNA
 <213> Bovine

<400> 6	
ctggcaactc	60
tggtcagag	
agtgaggag	
gttttacccc	
atgttccact	
ggcgctcatc	60
cagagagacc	
tagccaggac	
tggtctgtga	
gacttgacca	
tcactaatct	
gcttgaggga	120
gccgtagctt	
tcattgcctga	
agacatcaact	
gaggggagcc	
aatcccttgc	
cacagcctcc	180
actcccaagt	
tccccagctc	
tggtccggca	
accctcagc	
ccacagccct	
aacatttgcc	240
aagtcctect	
gggtccggca	
ggagagtcta	
caggagcgaa	
agcaggcgct	
gtatgaatgc	300
gcgag	305

<210> 7
 <211> 220
 <212> DNA
 <213> Bovine

<400> 7	
ctccttcctc	60
cagaggatgt	
cctccttcca	
gtcgaacctc	
aaccgctca	
aggagcctct	60
cggttcate	
aaagtcctcg	
agtggttgc	
ttctatcttt	
gcttttgcta	
cctgtggagg	120
ttttaagggc	
aaaacagaaa	
ttcaagtgtc	
ttgtactacg	
ggtcctgaga	
ataaaacgat	180
tacagctgct	
tttggttatc	
cattcaggtt	
gaatgaagca	220

<210> 8
 <211> 565
 <212> DNA
 <213> Bovine

<400> 8	
accaggcaac	60
ccagaaagcc	
aggcgtggag	
actgatcctg	
cgaggaggaaa	
gggttcatca	60
tggtcgatga	
tctaaaacga	
ttcctgtata	
aaaaattacc	
gagtgttgag	
gggtccatg	120
ctattgttgt	
gtcagataga	
gatggagtgc	
ctgtcatcaa	
agtggccaat	
gataatgctc	180
cagagcatgc	
tttgagacct	
ggtttcttat	
caacttttgc	
ccttgcaaca	
gaccaaggaa	240
gcaaactcgg	
actttcaaaa	
aataaaagta	
tcatctgtta	
ctataatacc	
taccaggtgg	300
ttcaattcaa	
tcgtttacct	
ttggtagtga	
gtttcatagc	
cagcagcaat	
gctaatacag	360
gactaattgt	
cagcctggaa	
aagggaacttg	
ctccattatt	
tgaagaattg	
agacaagttg	420
tggaagtttc	
ttaatctgga	
gttttcttca	
tcatatcaga	
cacaatatca	
atccagcaat	480
ctttaggcca	
cagtgcact	
tgtatccatg	
tactcaagga	
cccccttttt	
ccactttact	540
ctagaaaaag	
agccttacag	
ataga	565

<210> 9
 <211> 436
 <212> DNA
 <213> Bovine

<400> 9

cagccggcca	agctggccga	ggccttcaag	tacttcgtgc	agggcatggg	atacatgccc	60
tccgccagca	tgacccgctt	gatgaggtct	cgcacagcgt	caggctccag	cgtcacgtcc	120
ctggaggggtg	cccgcagccg	ctcgcatacc	agcgagggca	ctcgagccg	ctcgcacacc	180
agcgagggca	cgcggctgga	catcatcccc	aactccggcg	gccccgggag	cagcgccggg	240
cccaactcca	cggaggtgtc	ctgctaggcg	gcctcggggc	cggccggcct	cccctggact	300
ctgggaccga	tcgctgtagc	tgcccctcct	cggccccc	tccccacccc	tgcttgccaa	360
ccgcacgtta	actcgtaact	cggattaat	ccaaagctta	tttgtacaag	tgagctctgg	420
tgacgacacg	gtgaga					436

<210> 10

<211> 315

<212> DNA

<213> Bovine

<400> 10

aaggaatcca	agaggggtca	ggcgtcgccc	tcgccctgaa	gacggaggag	gggcaagatg	60
gtttacatct	cgaatggaca	agtgttggac	agcaggagtc	agtccecatg	gagattatct	120
tttataacag	atttcttctg	gggaatagct	gagtgttggtg	ttttgttttt	cagaactctg	180
cttcaacaag	atgtgaaaaa	gagaagaggc	tacggaagct	catctgattc	cagatatgat	240
gacggaagag	ggccaccagg	aaaccccccc	agaagaagaa	tgggtcgaat	taatcatctg	300
cagggcccta	atcct					315

<210> 11

<211> 333

<212> DNA

<213> Bovine

<400> 11

gaaagaccca	gcaactgggag	gctaaggaaa	agaggtgagt	caaggacgtc	ttcgtagtgg	60
agctactgag	attcgggagg	ccacgctggg	cttggttggc	gtccaaacga	cttggacagt	120
tcagtcattg	tcggctacgc	ggtgaggcgc	gccctgcgca	agagtaagac	ccttcgctac	180
ggagtcccca	tggtgttgct	gattgttggg	ggttcttttg	gtcttcgtga	gttttctcaa	240
attcggttatg	atgctgtgaa	gattaaaatt	gatcctgagt	tagaaaaaaa	gctgaaaatg	300
aataaagtgt	cattggaatc	agaatatgag	aaa			333

<210> 12

<211> 930

<212> DNA

<213> Bovine

<400> 12

ggatgaccca	gatcatgttc	gagaccttca	acacccctgc	catgtacgtg	gccatccagg	60
ctgtgctgtc	cctgtatgcc	tctggccgca	ccaccggcat	cgtgatggac	tccggtgacg	120
gggtcaccca	cacggtgccc	atctatgagg	ggtacgcctt	tccccatgcc	atcctgcgtc	180
tggacctggc	tggccgggac	ctgaeggact	acctcatgaa	gatcctcacg	gagcgtggct	240
acagcttcac	caccacggcc	gagcgggaaa	tcgtccgtga	catcaaggag	aagccttget	300
acgtggccct	ggacttcgag	caggagatgg	ccaccgcggc	ctccagctcc	tccctggaga	360
agagctacga	gcttctctgac	gggcagggtca	tcaccatcgg	caatgagcgg	ttccgctgcc	420
ctgaggctct	cttccagcct	tccttctctg	gcatggaatc	ctgcggcatt	cacgaaacta	480
ccttcaattc	catcatgaag	tgtgacgtcg	acatccgcaa	ggacctctac	gccaacacgg	540
tgctgtccgg	cgggaccacc	atgtaccccg	gcategcgga	caggatgcag	aaagagatca	600
ctgccctggc	accagacaca	atgaagatca	agatcatcgc	gccccctgag	cgcaagtact	660
ccgtgtggat	tggcggctcc	atcctggcct	cgctgtccac	cttccagcag	atgtggatca	720
gcaagcagga	gtacgatgag	tccggccctt	ccatcgtcca	ccgcaaatgc	ttctaggcgg	780
actgttagct	gcgttacacc	ctttttcttg	acaaaaccta	acttgccgag	aaaacgagat	840

gagattggca	tggttttatt	tggttttttt	ttttgtcttt	tttgattttt	tttttttggc	900
gcttgactca	ggatttaaaa	actggaacgg				930

<210> 13
 <211> 639
 <212> DNA
 <213> Bovine

<400> 13						
gaagaccgtg	gccgtgccct	gcataattca	agactcaagt	tcatgttgcg	tgccgaactg	60
cgagcccagc	ctgtccgtgc	agccaccagc	cctcgaggac	ctgtccttgg	gctccaacgc	120
cagcctcacg	tgcacactga	gtggcctgaa	aagcgccgag	ggcgccagct	tcacctggaa	180
cccagacaggt	gggaagaccg	ccgtccaggg	gtcgcccaag	cgtgactcct	gtggctgcta	240
cagcgtgtcc	agcgtcctgc	cgggctgtgc	cgatccctgg	aacagtggac	agactttctc	300
ctgctctgtc	acccaccccg	agtccaagag	ttcactgacc	gccaccatca	agaaagaactt	360
agggaacacg	ttccggcctc	aggtccacct	gctgccgccc	ccgtcggagg	agctggccct	420
caacgagctg	gtgacgctga	cgtgcctggg	gcggggattc	aaccccaagg	aggtgctggg	480
gcgttggtg	cagggcaatc	aagagctgcc	ccgcgagaag	tatctgacct	gggcccctg	540
cccagagctg	ccagagcgta	ccaccttegc	cgtgaccaac	gtgctacgcg	tggacgccga	600
ggtctggaag	cagggggaca	ccttctctgc	atggtgggc			639

<210> 14
 <211> 565
 <212> DNA
 <213> Bovine

<400> 14						
cccgactega	cgtcgtcggt	acaggggaaga	agaagcgggt	gagaaaaact	tctgtttcca	60
ccgttttgcc	catttctgca	gatttggttc	gaggccgagg	agcctttggt	ggaagagatg	120
gtcatgggtc	tgagccccct	gtttttggtc	ttcatactgg	gtctgggtct	gaccccagtg	180
gccccggctc	aagatgacta	cagatacata	cacttcctga	cccagcacta	cgatgccaaa	240
ccaaagggcc	ggaatgacga	atattgtttt	aacatgatga	aaaatcgacg	cctgaccaga	300
ccttgcaaag	accgcaacac	ctttattcat	ggcaacaaga	atgacattaa	ggccatctgt	360
gaggacagaa	atggacagcc	ttacagaggc	gatctcagaa	taagcaagtc	tgaattccag	420
atcaccatct	gcaagcataa	aggaggttcc	tcccggcctc	catgccggta	cggagccaca	480
gaagactcca	gagtcattgt	tgtcggctgt	gaaaatggct	tgcccgtcca	ctttgatgag	540
tcctttatca	ctccacgcca	ctagc				565

<210> 15
 <211> 421
 <212> DNA
 <213> Bovine

<400> 15						
gcgattcatg	ctgctgttca	gccggcaggg	gaagctgcgg	ctgcaaaaat	ggtacctggc	60
cacctcagac	aaggagcgga	agaagatggg	tcgggagctt	atgcagggtg	ttctggctcg	120
caagcccaag	atgtgcagct	tcctggagtg	gagggaacctc	aaagttgtct	ataagagata	180
cgccagcctc	tactttctgt	gtgccatcga	gggccaagac	aatgagctca	tcacgctgga	240
gctgatccac	cgatacgtgg	agctcctgga	caaatacttt	ggcagcgttt	gcgagctgga	300
catcatcttc	aattttgaga	aggcctactt	catcttggat	gagtttctga	tggggggaga	360
tgtccaggac	acctccaaga	agagtgtgct	gaaggccatc	gagcaggcgg	acctactgca	420
g						421

<210> 16
 <211> 504
 <212> DNA
 <213> Bovine

<400> 16

gggtgcaggt	aatctgcatg	aaggggaagg	ccaagtataa	ggccagtgag	aacgccatcg	60
tgtggaagat	caagcgcag	gcaggcatga	aggaatcaca	aatcagcgct	gagattgagc	120
tgctgcccac	caacgacaag	aagaaatggg	ctcgaccccc	catttcaatg	aactttgagg	180
tgccattcgc	accttctggt	ctcaagggtgc	gctacttgaa	ggtgtttgaa	ccgaagctga	240
actacagcga	ccacgatgtc	atcaaatggg	tgcgctacat	tgccgcgagc	ggcatttatg	300
agacccgctg	ctagctgcct	ggtggccgct	agcccacctc	cccacccacc	ctcttccaca	360
ggtctgggtg	cccttggcca	ccacacatca	gtgtctcttc	cctcctgctt	tgctgcctgc	420
cctttgcact	agcccccgag	tctaggtctg	gaccaaccac	attgcaagtg	ggactgggtg	480
agcagtcctt	gggctcctg	aatg				504

<210> 17

<211> 644

<212> DNA

<213> Bovine

<400> 17

ccagccgccc	ccatgaccc	gctggaggtg	aacaaccgca	tcacgagga	gacgctcgcg	60
ctcaagttcg	agaacgcggc	cgccggaaac	aaaccagaag	ctgtagaagt	aacatttgca	120
gattttgatg	gagtcctctt	cagccacagg	gaacctccct	tagagctgaa	agataccgat	180
gccgcgctgg	gtgacaacat	tggctacatt	accttcgtgc	tggtccctcg	ccacaccaac	240
gccagtgtc	gagacaacac	cateaacctg	atccacacgt	tccgggacta	cctgcactac	300
cacatcaagt	gctcgaaggc	ctatatccac	acacgtatgc	gggcaaaaac	atccgacttc	360
ctcaagggtg	tgaaccgtgc	acgcccagat	gccgagaaaa	aggaaatgaa	aacaatcacg	420
gggaagacgt	tttcatcccc	ctaactcttg	ggaacaggaa	gaggaagcgg	ctggcaactg	480
aaggctggaa	cacttgctac	tggataatcg	taagctttta	atgttgacac	tcttcagggt	540
cttaagggat	tctccggttt	ggttccattt	tgtacacggt	tggaaaataa	tctggcaaaa	600
acgagctgtg	cttgcaagga	cttcatgggt	ccaagaatta	aaag		644

<210> 18

<211> 375

<212> DNA

<213> Bovine

<400> 18

ctttatgaca	catcctgagt	ttaggataga	agattcagag	cctcatattc	cccttattga	60
tgacactgat	gctgaagatg	atgctcctac	aaaacgtaac	tccagtcctc	cacctctctc	120
caacaaaaat	aacaatgctg	ttgacagcgg	gatttacctt	acaatagaaa	tgaacaagtc	180
tgctacctct	tcacccccag	gaagcccact	acatagtttg	gaaacatcac	tctgattgta	240
agctgaacgt	taacacacta	gctgcattgt	aaagaaacaa	attgaaactg	ggtcttttca	300
catattgtga	cggacaagat	agtattcttg	tctctggact	tcaacagaag	acatcttgac	360
caatgtagat	ttatt					375

<210> 19

<211> 596

<212> DNA

<213> Bovine

<400> 19

gagacacgtc	aacatgactg	acaatgatct	tatcaatatt	cttgaccctt	tttatcatct	60
ttcaactaaa	agtttcaaaa	cacaactttt	atcacaatcc	agaactgaca	ccaacaaaaa	120
tattaaaaca	aaacacccct	tgagaaacaa	aatgaacgaa	aattttattt	cctcttttat	180
tacccctgta	atttttaggtc	tccctctcgt	aacccttata	gtactattcc	caagcctact	240
attcccaaca	tcaaaccgac	tagtaagcaa	tgcctttgta	acctccaac	aatgaatact	300
tcaacttgta	tcaaaacaaa	taatgagtat	ccacaattct	aaaggacaaa	catgaacatt	360
aatattaata	tctctgatcc	tattttattg	atcaacaaac	ctactaggcc	tattacccca	420

ttcattcaca	ccaacaacac	aactatcaat	aaacctaggc	atagccatce	ccctgtgagc	480
aggagccgta	attacaggat	tccgcaataa	aactaaagca	tcacttgccc	atttcttacc	540
acaaggaaca	cccactccac	taatcccaat	actagtaatt	attgaaacta	tcagcc	596

<210> 20
 <211> 296
 <212> DNA
 <213> Bovine

<400> 20						
cgaggggtcac	ggacagtatg	gttccgcccgg	tgcaggtctc	tccgctcatc	aagctcggcc	60
gttactccgc	cctgttcctc	ggcatggcct	acggcgccaa	gcgctacaat	tacctgaaac	120
ctcgggcaga	agaggagagg	aggcttgag	ccgaggagaa	gaagaagcgg	gatgagcaga	180
agcgcatcga	gcgggagctg	gcggaagccc	aagaggatac	catattgaag	tgagcctgcc	240
cttctcctga	gcagtgtggc	tgaataaagt	tttctgtgct	caaaaaaaaa	aaaaaa	296

<210> 21
 <211> 669
 <212> DNA
 <213> Bovine

<400> 21						
ccgaggcgca	gcagaggagg	gtccaggaga	cggaggtgaa	gccatgtggc	agctgctgct	60
ccccctggcc	ctggggctgg	gcaccatggg	cttgggcagg	gcggagetca	cgacggccca	120
gcaccggggc	ctgcaggtgg	ccctggagga	gttccacaag	catccaccgc	tgctgtgggc	180
cttccaggtg	accagcgtgg	acaatgcggc	agacacgctc	ttcccggctg	ggcagtttgt	240
gaggtggag	ttcaagctcc	agcagacgag	ctgtcggaa	aaagactgga	ggaaagaaga	300
ctgcaaagtc	aagcccaacg	ggagaaagcg	gaaatgcctg	gcctgcatca	agctggactc	360
aaaagatcaa	gtcctgggccc	ggatggtgca	ctgtcccata	cagactcagg	agctggacga	420
cgcccaggac	gcccagtgca	gcaggggtgga	gcgcgcgggc	gaggaccccc	acagctacta	480
cctccccgga	cagtttgect	tcataaaagc	cttgtccccc	tgagctgagg	cctggcagaa	540
gtcacccggc	ttcctggaag	gaagggaggt	cgccagtgaa	agcccgccctc	cctcctctgg	600
gcccggggag	gggccacccc	ctgaccctg	agctaataaa	gctgtgctca	gctgaaaaaa	660
aaaaaaaaa						669

<210> 22
 <211> 558
 <212> DNA
 <213> Bovine

<400> 22						
ctgccgtcca	tcacatcctg	tttgttctac	caccgtgtcc	tgtgtgtctg	ctgaggggag	60
tgcccagcgg	ggtccagggc	cttggcctcc	gtgcccagct	gcgtgttgcg	gtgagtgggtg	120
gagagctaca	gctctggctc	tcctgtcatc	actggatgct	ctgcaggtct	gtgtctgcac	180
ctgtggaagg	gcctgggcct	ggccctgttt	ccttgctggg	aagcacgtgg	gtccgggggt	240
ggctggggccc	ctgagatgca	cctcaggggc	aggggggggac	cccagccccc	cccgtgagac	300
tgaactttcc	tcaaacaatga	tggtcctcaa	tgacatttta	acttcttttg	atgaaaactg	360
tcacttttagc	atgtagagta	acctattaca	gaatcctgtg	cagtgattct	agaatctcta	420
aattgtatga	tgtgttatat	aagaatttat	ttgctatcga	cattcccgtg	taaaggagag	480
acatatcatg	ctgctgtaat	gaatttgtgt	caagatgatc	caataaactt	gcgaaacagg	540
caaaaaaaaa	aaaaaaaaa					558

<210> 23
 <211> 300
 <212> DNA
 <213> Bovine

<400> 23
gaagaatggt cctgctgcat ccggaacctc cttcttggcc aggagaaaga tgtagaggtt 60
tccataccag cctccttctt cccaaggctg actccctgga tggtaggctgt ggctgtcatc 120
ttggtgggtcc taggacttct cacaattggg tccataatct ttacctggag actatacaag 180
gaaagatcca gacagaggag gaatgaattc agctctaaag agaaactcct ggaagagctc 240
aatggaaaaa gggctacatt gcatgcagtg gatgtgactc tggatccaga tactgcccac 300

<210> 24
<211> 331
<212> DNA
<213> Bovine

<400> 24
cggcagaccc gcactacact tgggttgcct gaacacgccg ttttctgggg acattcgagc 60
tgatttccag tgcttccagc aggccagggc tgcaggactg ttgtccacct accgagcatt 120
cttctcctcc cttttgcaag atctctccac agttgtaagg aaagcagaga gatatagcct 180
tccaatagtg aacctcaagg gccaaagtact ttttaataat tgggactcaa tttttcttgg 240
ccacggaggt cagttcaata cacacattcc aatatattcc tttgatggcc cagatgtaat 300
gacagatctt tctggcccag aaggcatttt g 331

<210> 25
<211> 747
<212> DNA
<213> Bovine

<400> 25
ggcggcattt ctctcttttc cggttatggc ggcgtaggga actatgagca gcaaagtctc 60
ccgcgacacc ctctacgagg cgggtgcggg agtcctgcac gggaatcagc gcaagcgcag 120
aaagtttttg gagacggtgg agcttcagat cagcctgaag aactatgacc ctcagaagga 180
caaacgcttc tcgggcaccg tcaggcttaa gtccactccc cggcccaagt tctccgtgtg 240
gtcttggggg accagcagca ttgtgatgag gccaaaggct tggatatccc ccacatggac 300
atcgaggcgc tgaaaaaact caacaagaat aagaaactgg tcaagaagct ggccaagaaa 360
tatgatgcct ttttggcttc agagtctctg atcaagcaga tccccgaat cctgggcccg 420
ggcctgaaca aggtctggca gtcccttccc ttgttgacct acaatgagaa catggtggcc 480
aaagttagtg aagtgaagtc cacgatcaag ttccagatga agaaggtgct gtgtctggca 540
gtggctgttg gccacgtgaa gatgacagat gatgagcttg tgtacaacat ccacttagct 600
gtcaacttcc tgggtgtcatt gctcaagaaa aattggcaga acgtcagggc cttgtacatt 660
aagaacacca tgggcaagcc ccaacgtctg tactaaggca cagcttaata aacctactaa 720
accatcaaaa aaaaaaaaaa aaaaaaa 747

<210> 26
<211> 589
<212> DNA
<213> Bovine

<400> 26
ggcggtagtg gccagtcgt cactggcgca gaattgctga cggaaacgggc cgaggctggc 60
tggetgtggg aagagaggcg aggttcaggt cttctacggt tgcagtgaag gtttcttgaa 120
aatcttgttt taattgagtc ttttaataaat acaacgtaaa aatggcttca aaaagagctc 180
tagtcacccg ggetaaagga gcagaggaaa tggagacggt tatccctgta gatgtcatga 240
gacgagctgg aattaaggtc accgttgcag gtctggctgg aaaagacccg gtacagtgtg 300
gccgagatgt tgtcatttgt cctgatgcca gtctggaaga tgcaaaaaaa gagggacctt 360
atgatgtggt ggttcttcca ggaggtaatc tgggtgcaca gaatttatcc gagtccgctg 420
ctgtgaagga gatactgaag gaacaagaga agaggaaggg cctcatcgct gccatctgtg 480
caggtcctac agctctgctg gctcatgaaa taggttttgg aagcaaagtt acaacacacc 540
cacttgctaa agacaaaatg atgaacggaa gtcattacag ctactccga 589

<210> 27
 <211> 333
 <212> DNA
 <213> Bovine

<400> 27
 caagcctcag ttcatcagca gaggaacctt caaccctgaa aagggcaaac aaaaattaaa 60
 gaatgtgaaa aactcacctc agaaaaccaa agagacccca gaggggatag ttgtgtctag 120
 ccgcaggaaa actgtggacc cagactgcag ctccggccca cagctagctc tctttgggaa 180
 taatgagttt atggcttgaa ctggcagatg tgtgtccctt atggctacat ctcactcttg 240
 ggcttcatca cctgggccac agtatccatc ctgattgtgg tcctgcctct tgcccagaca 300
 tacaaccaag accttgtgtg ctgagtcctg ggt 333

<210> 28
 <211> 375
 <212> DNA
 <213> Bovine

<400> 28
 gcgagctcag cgacacaagt acataaataa aggataaagt atttacagaa caaatcttca 60
 atcaagtata acattttgat gcttggcagc taaactcctt gtgccctcac tatgccagca 120
 gcaactgtag atcatagcca aagaatttgt gaagtttggg cttgcaacct ggatgaagag 180
 atgaagaaaa ttcgtcaagt tatccgaaaa tataattacg ttgctatgga caccgagttt 240
 ccaggcgtgg ttgcaagacc cattggagaa ttcaggagca atgctgacta tcagtaccaa 300
 ctgttgcggt gtaatgtaga cttgttgaag ataattcaac taggactgac atttatgaat 360
 gagcaggaga atacc 375

<210> 29
 <211> 575
 <212> DNA
 <213> Bovine

<400> 29
 gccgtcagca ttcttagtct gggaggacct gcttgttcta tcacaatgaa ctggctggtg 60
 tgggcactcc tgetgtgctc ctctgcaatg gcacatgtgc acagagaccc cactctggat 120
 catcactggg atctctggaa gaaaacctat ggaaaacaat acaaagaaaa gaatgaggaa 180
 gtagcacggc gtctcatctg ggaaaagaat ctaaaaactg ttacacttca caatctggag 240
 cattcaatgg gaatgcattc atatgagcta ggcatgaacc acctaggaga catgaccagt 300
 gaagaagtga tatctttaat gagttccttg agagttccca gccaatggcc aagaaatgtc 360
 acttacaagt cagaccctaa tcagaaattg cctgattcta tggactggag agagaagggg 420
 tgtgttactg aagtgaataa ccagggtgct tgtggttctt gctgggcttt cagtgtgtg 480
 ggagccctgg aagcacaagt gaagctgaaa acaggaaagc tgggtgtctct gagtgcacag 540
 aacctggtgg attgctcaac tgcaaaatat gggaa 575

<210> 30
 <211> 315
 <212> DNA
 <213> Bovine

<400> 30
 aggacatct ctacactgtt cccatccggg aacagggcaa catctacaag cccaacaaca 60
 aggctatggc agaggaaatg aacgagaagc aagtgtacga cgcgcacacc aaggagatag 120
 atctggtcaa ccgcgacccc aagcatctca acgacgacgt ggtcaagatt gattttgaag 180
 atgtgattgc agaaccagaa ggaacacaca gtttcgatgg catctggaag gccagcttca 240
 ccaccttcac tgtgacaaag tactggtttt accgtttgct gtctgcctct ttggcatccc 300
 aatggcactc atctg 315

<210> 31
 <211> 1220
 <212> DNA
 <213> Bovine

<400> 31
 tatacctaac gtcgttctct ccacttgtct tcttcccaca gataaagcag ataacttcat 60
 cctgcccaca agaccaacac gatggcatta ttcacgggtg ttttgttcct ggctgctgtg 120
 tggtttccat tctttcctgc aaagggacag gatcgacgtt ttgctgattt gtcaaacacc 180
 ctgaaaaatg tccaaactga gattgtaaac aaacacaatg acctaaggag aggagtctcg 240
 ccacctccca gtaacatgct gaagatgcaa tggaacacca cggcagcagc aaatgcccac 300
 aattgggcaa acaagtgcct tttcaaacac agtaagaaag aggatagaag agtaggtaca 360
 aggaactgtg gcgagaatct ctttatgtca agttaccctt ctacatggtc taatgcaatc 420
 caaagetggc atgatgaggt ccatgatttt gtttttgaag tagggccgaa gagtcctcaa 480
 gcagtaattg gacatttcac ccagattgtt tgggtactcat ctttccttat tggatgtgga 540
 gttgcctact gcccacaaca aagtctaaag tacctctatg tttgccataa ctgtcctgct 600
 ggtaatatgt ttggcagaca acatgtccct taccaaaagg gaacaccttg tggcagctgc 660
 cccaatcatt gtgacaacgg actatgcacc aatagttgtg agtatgaaga tacctattct 720
 aactgtgcat ctttaaagga aacatggacc tgtgcctctg attttgtgaa gaccaattgc 780
 aaggctgcct gcaattgtca aggcaaaatt tattaaatc caagcactga ccgagcaggg 840
 ctacatgatg gaaggctgca tcatctactc agatttgata ttactaaca aggaaatcac 900
 agacatgtta gctacaaatt tgatttcaag tagtaaagag tctttttctc ctggatctgc 960
 tttttatttt acagaatttt ttttcataca aaaaaaatta atgtaacctt atctatgata 1020
 acaactttgg attttgatat caattgggtg atgtaaatat aattgaattt aatcaagttg 1080
 aagattctga aagttgtatt ctcttacaac tatgatcact acaaatttga actgaaattg 1140
 agaatcatgt ataaaatcaa caagctacaa gtatatattt catggcacag ggcattgtagc 1200
 caatattcta taataactat 1220

<210> 32
 <211> 775
 <212> DNA
 <213> Bovine

<400> 32
 agtgcacgtg tctggacggg tgggtgggct gcgtgcccct atgcagcgtg gacgtccgcc 60
 tgcccagccc cgactgcccc ttccctcggg ggggtcaaact gcccgggaaa tgctgagagg 120
 aatgggtgtg tgatgagccc aaggagcaca ccgtgggtcg ccctgcgctc gcagcttacc 180
 ggccggaaga cacgtttggc ccagacccaa ccatgatccg agccaactgc ctggtccaga 240
 ccacagagtg gagtgccctg tccaagacct gcggaatggg catctccacc cgggttacca 300
 atgacaacgc attctgcagg ctggagaagc agagccgcct ctgcatggtc aggccttgcg 360
 aagctgacct ggaggagAAC attaagaaag gcaaaaagt catccggacc cccaaaatct 420
 ccaagcctat caagtttgag ctttctggct gcaccagcat gaagacatac cgagctaaat 480
 tctgcggagt gtgcacagac gggcggtgct gcacccccca cagaaccacc acccttcccg 540
 tggagttcaa gtgtcctgat ggggaggtca tgaagaagag catgatgttc atcaagacct 600
 gtgcctgcc ttacaactgc cccggagaca atgacatctt cgagtcactg tactacagga 660
 agatgtatgg agacatggcc taaagccaga gacagtgaga cacgtgaaca ttttaggctg 720
 tcacttgaat cgattcacat ctcatttttg tgtacacgtg atttcagtgg caca 775

<210> 33
 <211> 652
 <212> DNA
 <213> Bovine

<400> 33
 ggacgccgcc acctcggagc ttcccttgcc gtttagccat ggtcaacccc accgtgttct 60
 tcgacatcgc tgtcgacggc gagcccttgg gccgcgtctc ttttgagctg tttgcagaca 120
 aagttccaaa gacagcagaa aactttcgtg ctctgagcac tggagagaaa ggatttggtt 180

ataaagggttc	ctgctttcac	agaataattc	cgggatttat	gtgccagggt	ggtgacttca	240
cacgccataa	tggtactggt	ggcaagtcca	tctatggcga	gaaatttgat	gatgagaatt	300
tcattttgaa	gcatacaggt	cctggcatct	tgtccatggc	aatgctggc	cccaacacaa	360
atggttccca	gtttttcatt	tgeactgcca	agactgagtg	gttgatggc	aagcacgtgg	420
tctttggcaa	ggtgaaagag	ggcatgaata	ttgtggaagc	catggagcgc	tttgggtcca	480
ggaatggcaa	gaccagcaag	aagatcacca	ttgctgaactg	tggacaaatc	taataaattt	540
gacttggtgt	ttacttaagc	accagaccat	tccttcctgt	agcccaagaa	aacacccctt	600
caccccatgt	gcttgaaata	tcctataatc	tttgtgctct	tgctacagtc	tt	652

<210> 34

<211> 382

<212> DNA

<213> Bovine

<400> 34

cacgagttag	aacgaacagg	gcattactta	actgtgaaag	ataaccaagt	ggttcagttg	60
catccctcta	ctgtttcttga	ccacaagcct	gaatgggtgc	tttataatga	gtttgttctt	120
acaacaaaga	attacatccg	gacgtgtaca	gacatcaagc	ccgaatgggt	ggtgaaaatt	180
gcccttcaat	attatgacat	gagcaatttc	ccacagtgtg	aagcaaagag	acagttggac	240
cgcattcattg	ccaaactgca	atccaaggaa	tattcacagt	actgaaatc	aatgcttaga	300
actgaaatta	ttcagaggac	agctttaaaa	gatgaacgaa	ctgaaaagtt	caagttgtgc	360
tcttcattgtt	gggtcaataa	tg				382

<210> 35

<211> 315

<212> DNA

<213> Bovine

<400> 35

cgaagatggc	ggctttctcc	gagatgggtg	ttatgcctga	gattgcacaa	gccgtggaag	60
agatggattg	gcttctccca	actgatatcc	aggctgaatc	gatecccttc	atcctaggag	120
gaggtgatgt	ccttatggct	gcagaaacag	gaagtggaaa	aactggggct	ttcagtattc	180
cgtttattca	gatagtgtat	gaaactctga	aagaccaaca	agaaggcaaa	aaaggaaaag	240
cgacaattaa	aactgggtgct	tcagtgtctga	acaaatggga	gaatgatgag	tgtgctcaga	300
agaagatcat	tgag					315

<210> 36

<211> 611

<212> DNA

<213> Bovine

<400> 36

gcgagtgcgt	agtccgcgcg	gccggatcgt	ggcgtggacg	ccggacgttc	tcccagaggg	60
aagtctcgtc	ctgccggtcg	tctcgggctg	tttggccgag	gtcgttggca	tcactgagcg	120
tgaccgtgcc	tgagagctca	gggccccctg	cacaccctct	tctcggcagg	attcagagag	180
aaaataccca	tcttcctggg	acatggcagg	taagaaagtg	ctcatcgtct	acgcacacca	240
agagcccagg	tctttgaacg	ggtccctgaa	ggacgtggcg	gtggctgaac	tgagccagca	300
gggctgcagc	gtcatcgttt	cggacctcta	tgccatgaac	tttgagccca	gggccacagg	360
gaaggatata	actggcaccc	tctccaaccc	tggtttcttc	aactatggcg	tggaggccca	420
caaggcctac	aagaagcagt	ctctgagcag	tgacatcatt	gaggagcaga	agaagcttca	480
ggaggccgac	ctggtgatat	tccagttccc	gctgtactgg	ttcagcgtgc	ccgccgtgct	540
gaagggctgg	atggacaggg	tgctctgtca	gggctttgcc	ttcgacttcc	ccggctccta	600
cgatgacggc	t					611

<210> 37

<211> 317

<212> DNA

<213> Bovine

<400> 37

cagccccct	gcactccgtg	ctgagcaacg	tggagggtcac	cctcaacgtg	ctggccgact	60
cggtcctcat	ggagcagccc	ccgctccgca	ggcgcaagct	ggagcacttg	atcacagagc	120
tggttcacca	gagagacgtc	accagggtccc	tgatcaagag	cagggtggac	aacgccaaagt	180
ctttcgagtg	gctcagccag	atgcggttct	actttgaccc	gaagcagacc	gacgtgttgc	240
agcaactgtc	gattcagatg	gcgaatgcca	agtttaacta	tggctttgaa	tacctgggtg	300
ttcaggacaa	agctgggt					317

<210> 38

<211> 959

<212> DNA

<213> Bovine

<400> 38

ggccgcccagg	acacaggtgt	cgtgaaaacc	accgttaaac	ctaagccaaa	atgggaaagg	60
agaagaccca	catcaacatc	gttgtcattg	ggcacgtaga	ttcagggaag	tctaccacga	120
ctggccatct	gatctacaaa	tgtggcgggg	tgcacaagag	aacaattgaa	aagttecgaga	180
aggaggctgc	cgagatggga	aagggtcctc	tcaaataatgc	ctgggtcttg	gacaaactta	240
aagctgaacg	tgagcgtggg	atcaccattg	atatctcctc	gtggaaattt	gagaccagca	300
agtactatgt	taccatcatt	gatgccccag	gacacagaga	cttcatcaaa	aacatgatta	360
caggcacatc	ccaggctgac	tgtgctgtcc	tgatcgttgc	tgctgggtgt	ggtgaatttg	420
aagccggtat	ctccaagaac	gggcagaccc	gtgagcatgc	ccttttggct	tacaccctgg	480
gtgtgaaaca	actaattggt	ggcgtaaaca	aaatggattc	cactgagcca	ccctatagcc	540
agaagagata	cgaagaaatt	gttaaggaag	tcagcaccta	tattaagaaa	attggetaca	600
accccgacac	agtagcattt	gtgccaat	ctggctggaa	tggtgacaac	atgctagaac	660
caagtgtctaa	tatgccatgg	ttcaagggat	ggaaagtcac	ccgtaaggac	ggcaatgcca	720
gtggaaccac	cctgcttgaa	gctctggatt	gcattctgcc	accaactcgc	ccaactgaca	780
aacccttgcg	tttgccctctc	caggatgtct	ataaaaattgg	tggatattgg	actgtccctg	840
tgggtcgtgt	ggagactggg	gttctcaaac	ctggcatggg	ggtcaccttt	gctccagtca	900
atgtaacaac	tgaagtgaag	tctgtagaaa	tgcgccatga	agcattgagt	gaagccctt	959

<210> 39

<211> 280

<212> DNA

<213> Bovine

<400> 39

tggttcctca	cctgcattaa	ccagccccag	ttccgggctg	tcttggggaga	ggtgaaactc	60
tgtgagaaaa	tggcccagtt	tgatgctaaa	aagtttgcag	agagccagcc	taaaaaggac	120
accccgacga	aggagaaagg	ttctcgagaa	gagaagctga	agccccaggc	agagcggaag	180
gagggcaaa	aggagaagaa	ggcagctgcc	cccgtcctg	aggaggagct	ggatgaatgt	240
gagcaggcgc	tggctgccga	gccgaaggcc	aaggatccct			280

<210> 40

<211> 167

<212> DNA

<213> Bovine

<400> 40

gaacaaatac	gatgacgatg	gagaggggtat	caccttgttt	cgctcttccc	atctgacgaa	60
caagtttgaa	gacaagactg	tggcatatac	agaacagaaa	atgaccagtg	ggaagattaa	120
aagatttatt	caggaaaaca	tttttgggtat	ctgccctcac	atgacag		167

<210> 41

<211> 666

<212> DNA
<213> Bovine

<400> 41

gggaaagctc	acaaaatgtg	tgatgcattt	gtaggtacct	ggaaacttgt	ctccagtga	60
aactttgatg	attacatgaa	agaagtgggc	gtgggctttg	ctaccaggaa	agtggctggc	120
atggccaaac	ccactttgat	catcagtttg	aatgggggtg	tggtcaccat	taaatcagaa	180
agcaccttta	aaaatactga	gatttccttc	aaattgggce	aggaatttga	tgaaatcact	240
ccagatgaca	ggaaagtcaa	gagcatcgta	aacttagatg	aagggtgctct	ggtacaagta	300
caaaactggg	atggaaaatc	aaccaccata	aagagaaaac	tcgtggatga	taagatgggtg	360
ctcgaatgtg	tcatgaatgg	tgtcactgcc	accacagttt	atgagagagc	ataagccaag	420
ggatattgaa	atggatgacg	tttgcacgca	actccatgac	tttctgctgg	atacgttgctc	480
caaacatata	ttgttatttt	ccactaataa	gcaagaaact	gattttcttc	cagactgatt	540
ttgatatggg	tatgttggtt	aaataaaaact	ttttagattt	ataaggctat	gtaatcattt	600
attcattatg	tttaacaatt	tcttactcat	aattagtgat	ggaaatataa	attgtattat	660
tgcttt						666

<210> 42

<211> 559

<212> DNA

<213> Bovine

<400> 42

cgcgttctct	gtcgtctttc	ccaacctagc	ccagcttcac	catggtggac	gccttcgtgg	60
gtacctggaa	gttagtggac	agcaagaatt	tcgatgacta	catgaagtca	ctcgggtgtcg	120
gttttgctac	caggcagggtg	ggcaatatga	ccaagcctac	cacaatcatc	gaagtgaatg	180
gggacacagt	catcataaaa	acacaaagca	ccttcaagaa	cacagagatc	agcttcaagc	240
tgggagtcga	gttcgatgag	accacagcag	atgacaggaa	agtcaagtcc	atcgtgacgc	300
tggatggcgg	caaacttgct	cacgtgcaga	aatggaatgg	acaagagaca	tcacttgctgc	360
gggaaatggg	ggacggaaac	ttcattctga	cactcaccca	tggcactgca	agttgcactc	420
gtacttaaga	gaacagcatg	actgcctctc	ttcactgact	gtctctgcag	tggctactct	480
gactcagaca	gatgctatct	tctcttgcat	ttgataatca	ctgactggaa	tctctgggtca	540
gtgacagctg	atcagtcgt					559

<210> 43

<211> 931

<212> DNA

<213> Bovine

<400> 43

cggagagtcg	ccgcggtttc	ctgcttcaac	agtgcttgaa	cggaaaccgg	ctgctcgtcc	60
cccgtacctc	cggccggcca	ctcagagcca	gccctcgtca	ccacttgaca	gcgccctccg	120
accggcccaa	ggtecccgcc	accgctccag	tgccgctcgg	ccgtcgccgc	caccaccacc	180
accaccgccc	gttttcagcc	gccaccatg	acgaccgcat	ccccctcgca	ggtgcgccag	240
aactaccacc	aggactcgga	ggccgccatc	aaccgccaga	tcaacctgga	gctctacgcc	300
tcctatgtct	acctgtccat	gtcgtactat	tttgaccgtg	atgatgtggc	tttgaagaac	360
tttgccaaat	actttcttca	ccaatctcat	gaggagaggg	aacatgctga	gagactgatg	420
aagctgcaga	accagcgagg	cggccgaatc	ttccttcagg	atatcaagaa	accagaccgt	480
gatgactggg	agaatgggct	gactgcaatg	gaatgtgcgc	tgtgcttgga	gagaagtgtg	540
aatcagtcac	tactggaact	gcacaaactg	gccactgaaa	aaaatgatcc	ccatctgtgt	600
gatttcattg	agactcatta	cctgaatgag	cagggtggaag	ccatcaaaga	attgggtgac	660
cacataacca	acctgcgcaa	gatgggggct	cctggatctg	gcatggcaga	gtacctcttt	720
gacaagcaca	ccctgggaca	cagtgcagagc	taagcctcag	gctggtttcc	cacagccaca	780
ggggtgactt	ccctgggtcac	caaggcagtg	catgcatatt	tgggttacct	tcactcttttc	840
tataagttgt	aacaaaacat	ctacttaagt	tctttcttta	gtaccattcc	ttcaaataaa	900
gtaatttggg	acccaaaaaa	aaaaaaaaaa	a			931

<210> 44
 <211> 610
 <212> DNA
 <213> Bovine

<400> 44
 cgtacaaaat tgatgcttat gtcccgaat gaagaggcca ctaagcattt agaatgcaca 60
 aagcaacttg cagcagcttt tcatgaggaa tttgttgtga gagaagattt gatgggcttg 120
 gcgataggaa cacatggtag taacatacag caagctagaa aggttcctgg agttacagct 180
 attgagctag atgaagatac tggaaacattt agaatctacg gagagagtgc tgatgctgta 240
 aaaaaggcta gaggtttctt ggaattttgtg gaggatttta ttcaggttcc taggaatctt 300
 gttggaagg taattgggaa aaatggcaaa gttattcaag aaatagtaga caaatctggt 360
 gtgggttcggg tgagaattga aggagacaat gaaaataaac tacctagaga agatggaatg 420
 gttccatttg tatttggttg cactaaagaa aagccttggg aaatgtgcaa gtgcttttca 480
 gagtatcata ttgcttatct aaaggaagta caacagctaa gaatggaacc gccttccaga 540
 ttgatggaac aacttcgacc agatttggtg tgggctttca gacccttttt cccccccaga 600
 ggggccttga 610

<210> 45
 <211> 344
 <212> DNA
 <213> Bovine

<400> 45
 gcagatcgca acatgactct ggaagaactt cgtggccagg acacggttcc agaaagcaca 60
 gccaggatgc agggcgccgg gaaagcgttg cagcagctgc tgttgctggc gcagcgccaa 120
 ggctgcctca cggccggcgt ctacgagtcg gccaaagtcc tgaacgtgga ccccgacaat 180
 gtgaccttct gcgtgctagc cgetgacgag gaggacgagg gcgatatcgc gctgcagatc 240
 cacttcactt tgatccaagc gttctgctgt gagaacgaca tagacatcgt gcgcgtgggc 300
 gacgtgcagc ggctggcggc gatcgtgggt accggcgacg aatc 344

<210> 46
 <211> 365
 <212> DNA
 <213> Bovine

<400> 46
 cttgggtgaa gagaactcct ggctaagcac aaaagcttgc catggaaaga agtgctgcgg 60
 ctggaggagg tacaggccaa actggggatc agtctggaag aaatgctttt gatcacagag 120
 gacgcccttc acctgaacc ctacagccct gaggagatct gcaaatgtct gggaattagc 180
 ctgcaggaac tcaagaccca aattctcagt ccaaacactc aagatgttct caccttcaaa 240
 ctctaccagc gggcaaagca cgtgtacagt gaggctgcga gagtgctcca gtttaagaag 300
 atatgtgaag aggcacctga caacgtggtc cagctgctgg gggaactaat gaaccagagc 360
 cacag 365

<210> 47
 <211> 684
 <212> DNA
 <213> Bovine

<400> 47
 acgagccgcg gtggaagcgg gtgcgcgggt cgcctctctg agttatccag ttccatcctt 60
 gtcgctgcgg cgacacccgc attctccgtc gccatgactg aacagatgac ccttcgtggc 120
 accctcaagg gccacaacgg ctgggtgacc cagatcgcta ccaactccca gttcccgagc 180
 atgatattgt ccgcctctcg agataagacc atcattatgt ggaagctgac cagagatgag 240
 accaactatg gtatcccaca gcgtgctctt cggggtcact cccactttgt tagtgatgtg 300
 gtcatttcct cagatggcca atttgccctc tcaggctcct gggatggaac ccttcgcctt 360

tgggatctca	caacggggcac	caccactcgc	cgattttgtag	gccataccaa	agatgtgctg	420
agtgtggcct	tctcttctga	caaccgggcaa	attgtctctg	gctcccgaga	cāaaaccatc	480
aaactatgga	atactctggg	tgtatgcaag	tatactgtcc	aggatgaaag	ccattcagag	540
tgggtgtctt	gtgtccgctt	ctcgcccaac	agcagcaatc	ccattattgt	ttctgtggc	600
tgggacaagc	tgggtcaagg	atggaacttg	gcaaattgta	aagctgaaga	ccaatcacat	660
cggccacaca	ggctacctga	acac				684

<210> 48

<211> 924

<212> DNA

<213> Bovine

<400> 48

gctctcagca	gcatggtgac	cgtgcccggc	agcacctcag	gacagacctt	cacctgcaac	60
gtagcccacc	cggccagcag	caccaagggtg	gacaaggctg	ttgatcccac	atgcaaacca	120
tcaccctgtg	actgttgccc	accccttgag	ctccccggag	gacctctgt	cttcactctc	180
ccaccgaaac	ccaaggacac	cctcacaatc	tcgggaacgc	ccgaggtcac	gtgtgtgggtg	240
gtggacgtgg	gccacgatga	ccccgagggtg	aagttctect	ggttcgtgga	caacgtggag	300
gtaaacacag	ccacgacgaa	gccgagagag	gagcagttca	acagcaccta	ccgcgtggtc	360
agcgccctgc	gcatccagca	ccaggactgg	actggaggaa	aggagtccac	gtgcaaggtc	420
cacaacgaag	gcctcccggc	ceccatcgtg	aggaccatct	ccaggaecca	agggcaggcc	480
cgggagccgc	aggtgtatgt	cctggcccca	ccccaggaag	agctcagcaa	aagcacggtc	540
agctcacct	gcatggtcac	cagcttctac	ccagactaca	tcgccgtgga	gtggcagaga	600
aatgggcagc	ctgagtcgga	ggacaagtac	ggcacgaccc	cgccccagct	ggacgccgac	660
agctcctact	tcctgtacag	caagctcagg	gtggacagga	acagctggca	ggaaggagac	720
acctacacgt	gtgtgggtgat	gcacgaggcc	ctgcacaatc	actacacgca	gaagtccacc	780
tctaagtctg	cgggtaaatg	agcctcacgt	ccctgcacca	gcaagccctc	acccagccca	840
ccctcccccg	ggctecagg	ccagccagga	cgccctagcc	cctccctgtg	tgcattcctc	900
ctgggcccgc	gtgaataaag	cacc				924

<210> 49

<211> 640

<212> DNA

<213> Bovine

<400> 49

cgagggtccc	gacgacgcca	aagacaacca	tcctectctg	aaaaccacaca	accagggagt	60
ctgaagttga	aaagacaccc	tgccagtgtt	ccaaatgccc	agaacctctg	ggaggactgt	120
ctgtcttcat	cttcccaccg	aaacccaagg	acaccctcac	aatctcggga	acgcccagg	180
tcacgtgtgt	ggtggtggac	gtggggccagg	atgaccccga	ggtgcagttc	tcctgggttcg	240
tggacgacgt	ggaggtgcac	acggccagga	cgaagccgag	agaggagcag	ttcaacagca	300
cctaccgcgt	ggtcagcgcc	ctgcgcaccc	agcaccagga	ctggctgcag	ggaaaggagt	360
tcaagtgcaa	ggtcaacaac	aaaggcctcc	cggcccccat	tgtgaggacc	atctccagga	420
ccaaagggca	ggcccgggag	ccgcagggtg	atgtcctgge	cccaccccgg	gaagagctca	480
gcaaaagcac	gctcagcctc	acctgcctga	tcaccggttt	ctaccagaa	gagatagacg	540
tggagtggca	gagaaatggg	cagcctgagt	cggaggacaa	gtaccacacg	accgcacccc	600
aactggatgc	tgacggcttc	ctactttctg	tacaagaagg			640

<210> 50

<211> 396

<212> DNA

<213> Bovine

<400> 50

tcaacacaca	gcacgagact	gtcacatacc	tgccagggca	caagctgccc	cccaatgtgg	60
tggtgtccc	tgatgtggtc	caggctgcag	cggatgccga	catcctgac	tttgtgggtc	120
cccatcagtt	catcggcaag	atctgtgatc	agctcaaggg	ccacctgaag	gccgacacca	180

ttggcgtgtc	tcttattaag	ggggtagacg	aaggccccaa	ggggctgaag	ctcatctctg	240
aagtgattgg	ggagcgcctt	ggcattccca	tgagcgtgct	gatggggggc	aacattgcca	300
acgaggtggc	tgatgagacg	ttctgtgaga	caaccattgg	tagcaagaac	caggctcatg	360
gacagcttct	gaaagagttg	atgcagacac	ccaatt			396

<210> 51
 <211> 635
 <212> DNA
 <213> Bovine

<400> 51						
ccagcgtccc	egccagcctt	cccgcagcag	acacagaccc	tccgagctga	gacccatggc	60
ccgagccgcg	accgccgcgc	ccccccggct	cctccgcaca	gcgatgctgc	tcctgctcct	120
ggtggccgcc	ggccggcgcg	cagcaggtga	gacccggcgc	ccgggatccc	ctggggccgta	180
cggggacggg	tgggtacccc	tggggacagc	ccctaaccce	ctctgtcctt	cccgcagggg	240
cgcccggtgt	caacgaactg	cgctgccatt	gcctgcaaac	tttgcagggg	attcacctca	300
aaaacataca	gagcgtgaag	gtgacgcccc	ccggccccca	ctgtggccaa	accgaagtca	360
tgtaagtaga	gccactgttg	ttgtccttat	caccctgtgc	gtccggatgc	cccaacctag	420
acttacagcc	cgacctcctg	tctcacatgg	attctccctt	ctctctgcag	agccactctt	480
aagaatggtc	aggaagcttg	tctcaaccct	gaagcttcca	tggttaagaa	aatcatcaat	540
aagatgccta	acaagtaagt	catggattgt	attcctactt	gcaactagag	ccattgctct	600
caaatactgg	catctacctc	ctgaaaatag	tattt			635

<210> 52
 <211> 519
 <212> DNA
 <213> Bovine

<400> 52						
gcacatctct	ctggctgacc	tggtagccat	cacggagctg	atgcaccccg	tgggtgccgg	60
ctgccaagtc	ttcaaaggcc	gacccaaget	ggccgcatgg	cgcagcgcg	tggaggcggc	120
ggtggggggag	gtcctcttcc	aagaggccca	tgaggtcctc	ctgaaggcca	aggactctca	180
gcctgcagac	cccaccttaa	agcagaagat	gctgcccaaa	gtgctggcca	tgatccagtg	240
agccaggaag	cttcgcctct	gctctgccct	tggcagttcg	cagagcaact	tcatttccat	300
tgtcccgtgg	gaggcagacc	cggagagcag	gcatggcttg	cctgectgag	tcctccgctc	360
ctggggccag	gttcccaccc	atctgtcgct	ggggctgcaa	agccacaaag	agaatggcac	420
acacagacct	tgtctctctt	catctgcgtt	ttctttccag	tctgggaaat	aaacctgggc	480
tcagcctgag	cctttgcttc	taaaaaaaaa	aaaaaaaaa			519

<210> 53
 <211> 507
 <212> DNA
 <213> Bovine

<400> 53						
gcggcagcgg	gaccacactg	accgtcctgg	gtcagcccaa	gtccgcaccc	tcggtcaccc	60
tggtcccgcg	ctccaaggag	gagctcgaca	ccaacaaggc	caccctgggtg	tgtctcatca	120
gcgacttcta	cccgggtagc	gtgaccgtgg	tctggaaggc	agaaggcagc	accatcaccc	180
gcgacgtgaa	gaccaccggg	ccctccaaac	agagcaacag	caagtacgcg	gccagcagct	240
acctgagcct	gacagacagc	gactggaaat	cgaaaggcag	ttacagctgc	gaggtcacgc	300
acgacgggag	caccgtgacg	aagacagtga	agccctcaga	gtgtccttag	ggccctggac	360
ccccaccctc	gggggcccctc	tggcccacac	cccctcccc	agctctccat	ggaccctga	420
gccccgcgcc	aggtcgccctc	acaccagggg	cctctcctcc	ctccctgttc	ctgctttcct	480
gaataaagac	cttctcattt	atcaagc				507

<210> 54
 <211> 658

<212> DNA
<213> Bovine

<400> 54

ctcggggggtc	cccgaccgat	tctccgggtc	caagtctggc	gacacagcca	ccctgaccat	60
cagctcgctc	caggctgagg	acgaggcgga	ttattttctgt	gggactgggtg	actacagtat	120
caatattggt	gttttcggca	gcgggaccac	actgaccgtc	ctgggtcagc	ccaagtcgcg	180
accctcggtc	accctgttcc	cgcctccaa	ggaggagctc	gacaccaaca	aggccaccct	240
ggtgtgtctc	atcagcgact	tctaccggg	tagcgtgacc	gtgggtctgga	aggcagacgg	300
cagcaccatc	accgcgacg	tgaagaccac	ccggccctcc	aaacagagca	acagcaagta	360
cgcggccagc	agctacctga	gcctgacaga	cagcgactgg	aaatcgaaag	gcagttacag	420
ctgcgaggtc	acgcacgacg	ggagcaccgt	gacgaagaca	gtgaagccct	cagagtgtcc	480
ttagggccct	ggacccccac	cctcgggggc	cctctggccc	acacccccctc	ccccacctct	540
ccatggaccc	ctgagccctc	accaggtcg	cctcacacca	ggggcctctc	ctccctccct	600
gttcctgctt	ctcctgaata	aagaccttct	catttatcag	ccgaaaaaaa	aaaaaaaa	658

<210> 55

<211> 409

<212> DNA

<213> Bovine

<400> 55

cgagcgaccg	gagactttga	ttcgaagccc	agttggggcg	accaggtgga	agaggaagga	60
gaggacgaca	aatgtgtcac	cagcgagctc	ctcaagggga	tccccctggc	cactggggat	120
accagtccag	agcctgagct	actgcgggga	gctccactgc	cgcctcccaa	ggaggtcatc	180
aatggaaaca	tcaagacagt	gacggagtat	aagatagatg	aggatggcaa	gaagttcaag	240
attgtccgca	ccttcagaat	tgagaccgg	aaggcctcaa	aggctgtggc	aaggaggaag	300
aactggaaga	agtttgggaa	ctcagaattt	gacccaccgg	ggcccaacgt	agctaccacc	360
acagtcagcg	atgatgtatc	catgacattc	atcaccagca	aagaggatc		409

<210> 56

<211> 789

<212> DNA

<213> Bovine

<400> 56

gcgggggatgt	tgtgctgacc	cagactcccc	tctccctgtc	tgtcgcccct	ggagagacgg	60
tcaccgtctc	ctgcaagtct	actcagagtg	tgaaaaacag	taatggaaac	acgtatgtgc	120
aatggtttca	acataaagca	ggccagtctc	cacggctatt	gatctategt	atttccaatc	180
gttacactgg	ggtcccagac	aggttcactg	gcagtgggtc	agagacggat	ttcacactta	240
caatcagcaa	tgtgcaggct	gaggatgctg	gagtctatta	ctgtcttcaa	agtacatata	300
ctccccatac	tttcggccaa	ggaaccaagg	tagagatcaa	agggctctgat	gctgagccat	360
ccgtcttctc	cttcaaacca	tctgatgagc	agctgaagac	cggaaactgtc	tctgtcgtgt	420
gcttggtgaa	tgattttctac	cccaaagata	tcaatgtcaa	gtggaaagtg	gatgggggta	480
ctcagagcag	cagcaacttc	caaaacagtt	tcacagacca	ggacagcaag	aaaagcacct	540
acagcctcag	cagcactctg	acactgceca	gctcagagta	ccaaagccat	gacgcctata	600
cgtgtgaggt	cagccacaag	agcctgacta	ccaccctcgt	caagagcttc	agtaagaacg	660
agtgttagag	caagaggtct	acaggctccc	cagtcgctgt	gctgattcgg	tcccagcccc	720
tcacccctcc	tcaggccctt	tgtccacaga	tcaaccctta	ttgcaatctt	ctgaccctac	780
tccccacct						789

<210> 57

<211> 726

<212> DNA

<213> Bovine

<400> 57

gtggatatgt	gagctggtac	caactgaccc	caggatcggc	ccccagaacc	ctcatgtatg	60
gtgacaccgg	tctagcctcg	ggggccccg	accgattctc	cgactccagg	tctgggaaca	120
cagecacctt	gaccatcaac	tcgctccagg	ctgaggacga	ggcagattat	ttctgtgcat	180
ctgctgaaga	gagtagcagt	aagggtcttt	tcggcagcgg	gaccacagtg	accgtcctgg	240
gtcagcccaa	gtccccaccc	tcggtcaccc	tggtccccgc	ctccacggag	gagctcaacg	300
gcaacaaggc	caccctgggtg	tgtctcatca	gcgacttcta	ccggggtagc	gtgaccgtgg	360
tctggaaggc	agacggcagc	accatcaccc	gcaacgtgga	gaccacccgg	gcctccaaac	420
agagcaacag	caagtagcgc	gccagcagct	acctgagcct	gacgagcagc	gactggaaat	480
cgaaaggcag	ttacagctgc	gaggtcacgc	acgaggggag	caccgtgacg	aagacagtga	540
agccctcaga	gtgttcttag	ggccctggac	ccccaccctc	ggggggccctc	tggcccacac	600
ccctccccc	acctctccat	ggacccttga	gcccctaccc	aggtcgccctc	acaccagggg	660
cctctcctcc	ctccctgttc	ctgtttctcc	tgaataaaga	ccttctcatt	taaaaaaaaa	720
aaaaaa						726

<210> 58

<211> 349

<212> DNA

<213> Bovine

<400> 58

ctcttaagga	aaaattgatt	gcaccagttg	cagaagaaga	gacaaggatc	ccaaacaata	60
agatcactgt	agtgggtggt	ggacaagttg	gtatggcatg	tgccatcagc	attctgggaa	120
agtctctgac	tgacgagctt	gctcttggtg	atgttttgga	agataaactc	aaaggagaaa	180
tgatggacct	gcagcacggg	agcttattcc	ttcagacacc	aaaaattgtg	gcagacaaag	240
attactctgt	cactgccaat	tccaagatcg	tggtggtaac	tgcaggagtt	cgccagcaag	300
aaggggagag	tcgcctgaat	ttggtgcaaa	ggaacgttaa	cgtcttcaa		349

<210> 59

<211> 490

<212> DNA

<213> Bovine

<400> 59

cgccttgggt	tcagcgggtc	tactgttctg	tccgcgctcg	cgcctgggtgc	cctgcatctc	60
ctacagaggg	acatcccccg	agatggagag	caaggcccta	cttctgctgg	ctctgagcgt	120
gtgcctgcag	agtctgaccg	tctcccgcgg	agggctgggtc	gccgcagaca	ggattacagg	180
aggaaaagat	tttagagaca	ttgaaagtaa	atttgctctc	aggactcccg	aagacacagc	240
tgaggacact	tgccacctca	ttcctggagt	gaccgaatct	gtggctaact	gtcacttcaa	300
ccacagcagc	aaaacctttg	tggggatcca	tggctggacg	gtgacaggaa	tgtatgagaa	360
gttgggtgcc	aaaactcgtg	gctgccttgt	acaaagaagg	aaccggactc	caaacgtcat	420
tcgttggtgg	gactggcctt	gcaacggggc	ccaagcaagc	atttattaca	gatgtcttgc	480
aagggtacac						490

<210> 60

<211> 433

<212> DNA

<213> Bovine

<400> 60

ttgtcattca	ccaaggctga	aaactcaaag	caaaataaac	catgaggctg	tctgtgactg	60
ccctgctggg	tactctggcc	ctttgctact	acaaggccaa	tgcaattgtc	tgtccaacgt	120
ttgctgcgga	tctgacagag	ttcttctact	ttcctgacct	gctgtacagg	ctgtcaettg	180
ccaagtacaa	tgcacctcca	gaagccgtgg	ctgccaaagat	ggaagtgaag	caatgcacgg	240
atagattctc	agtcaaaaac	agattaatca	ttaccaacat	actggggaaa	atactgctga	300
attgtactgt	cacagatgtg	aaagctgtac	taaatccttc	ttctgcataa	tcacctgac	360
ttccattgaa	aatgtagagg	tttcaacatc	ttgctcaata	aatgatttac	cctgcaaaaa	420
aaaaaaaaaa	aaa					433

<210> 61
 <211> 465
 <212> DNA
 <213> Bovine

<400> 61
 atcacctgct ctggaaccag cagcaatggt ggagatggcg attatgtgag ttggttccaa 60
 cagatccag gatcggggccc cagaacagtc atcttttggtg cgactcagcg accctctggg 120
 gtctccgagc gattctccgg ctccaggctc ggcaacacag ccaccctaac catcagctcg 180
 ctccaggccg aggacgaggc ggattatttc tgttcatttc ccgacaccac taacaatggt 240
 gctttcggca gcgggaccac cctgagcgtc ctgagacagc gactggaaat cgaaaggcag 300
 ttacagctgc gaggtcacgc acgacgggag caccgtgacg aagacagtga agccctcaga 360
 gtgtccttag ggccctggac cccacccctc gggggccctc tggccacac cccctcccc 420
 acctctccat ggacccctga gccctaccc aggtcgcta cacca 465

<210> 62
 <211> 308
 <212> DNA
 <213> Bovine

<400> 62
 ctcgtttatg attttgccaa ttttggtggt ctgagggttat cggagccagc accactcttt 60
 gacctggcca tgctcgctt agacagtccc gagagtggct ggacagagga ggatgggtccc 120
 aaggaaggac ttgctgagta cattgttgag tttctgaaaa agaaggctga gatgcttgca 180
 gactacttct ctctggagat tgatgaggaa gggaacctgg ttggattacc ccttctgatc 240
 gacaactatg tgeccccgct ggagggtctg cctatcttca tcctccgact ggccacagag 300
 gtgaactg 308

<210> 63
 <211> 495
 <212> DNA
 <213> Bovine

<400> 63
 atttcttata aagtgggttg gctgattccg gtcttctggt accggatttt tgactttggt 60
 ctacagctgcc tgggtgctat cagttctctg acttacttgc caagaatcaa agaatatctg 120
 gatcagttac ctgattttcc ctataaagat gacctcctgg cattggactc cagctgcctc 180
 ttgttcattg ttcttgtggt ctttgccctg ttcattcatt ttaaggctta tetgattaac 240
 tgtgtttgga actgttataa atacatcaac aacagaaaca tgccggagat tgctgtgtac 300
 ccagcctttg aggcgcctcc acagtatggt ttgccaacct atgaaatggc agtgaagatg 360
 cctgagaaag aaccaccacc tecttacata cctgcctgaa gaaattctgc ctttttcaat 420
 aaacctata ccagcttttt gtcttgggtca ttttacagaa tgctgcaaca cagggtcat 480
 catacttgggt tgate 495

<210> 64
 <211> 826
 <212> DNA
 <213> Bovine

<400> 64
 gctcccatcg gggctcttcac catcccccca tccttcgccc acatcttctt cacgaagtca 60
 gccaagctgt cctgtctggt cacaacactg gctcctatg atggcctgaa catcagctgg 120
 tcccgtcaga acggcaaggc cctggagacc cacacttatt ttgggagaca cctcaacgac 180
 accttcagcg cccgggggtga ggctcgggtc tgctcggagg actgggagtc cggagaggag 240
 ttcacgtgca cagtggccca ctgggacctg cccttcccag aaaagaacag cgtctccaag 300
 cccaaagacg tcgccatgaa accgcccgtc gtgtacctgc tgccctcaac gcgggaacag 360

ctgagcctgc	gggagtcggc	ctccgtcacc	tgcttgggtga	agggcttcgc	gcccgcggac	420
gtgttcgtgc	agtggctgca	gaggggggag	cccgtgacca	agagcaagta	cgtgaccagc	480
agcccggcgc	ccgagcctca	ggaccccagc	gtgtactttg	tgacacagcat	cctgacgggtg	540
gccgaggagg	actggagcaa	aggggagacc	tacacctgcg	tcgtgggcca	cgaggccctg	600
ccccacatgg	tcaccgagcg	gaccgtggac	aagtccaccg	gtaaaccac	cctgtacaac	660
gtgtccctgg	tcctgtctga	cacagccagc	acctgctact	gatgcctggg	cagagccccc	720
gggtgaccgt	cgctgtgtgt	gcctgagtg	agactaaccg	tgctcgggtgcg	cgagatgctg	780
cactctataa	aaattagaaa	taaaaagatc	cattcaaagc	tgaaaa		826

<210> 65
 <211> 745
 <212> DNA
 <213> Bovine

<400> 65						
cccggccctg	gcccggggccc	ggggagcaac	ttgacttcgg	ccccagggcc	ctccaccaca	60
acacgctcgc	tgaccgcatg	ccctgaggag	tccccgctgc	tcgtcggccc	catgctgatt	120
gagtttaaca	tacctgtgga	cctgaagctt	gtggagcacc	agaaccgaa	ggtgaagttg	180
ggtggctcgt	acacccccac	ggactgcac	tctcctcaca	aggtggccat	catcattcca	240
ttccgcaacc	ggcaggaaca	cctcaagtac	tggtctgtatt	acttgcaccc	aatcctacag	300
cgteagcagt	tagactatgg	catctatggt	atcaaccagg	ctggagagtc	catgttcaac	360
cgcgcaaagc	tcctcaatgt	tggctttaaa	gaggccttga	aggactatga	ctacaactgc	420
tttgtgttta	gcatgtgga	cctcatccca	atgaacgacc	ataacaccta	caggtgcttt	480
tcacagccac	ggcacatttc	tgtagcaatg	gataagtttg	gatttagcct	accttacgtg	540
cagtattttg	gaggtgtctc	tgctctaagt	aaacaacagt	ttctcagcat	caatggattt	600
cctaataact	actggggctg	gggaggtgaa	gatgatgaca	tttataacag	attagacttt	660
aaaggcatgt	ctgtgtctcg	cccaaagtgt	gtgatcggga	agtgtcggat	gatccgcact	720
cgagagacaa	agaaaaatga	accta				745

<210> 66
 <211> 897
 <212> DNA
 <213> Bovine

<400> 66						
gcctgcgcgg	ctgctgggtc	caatagtagt	cgtttaattc	cgctccggctt	ctctcccaca	60
taagtgcgtg	cagccaaccc	atggaggatt	caatggacat	ggacatgagc	cccttgaggc	120
cccagaacta	tcttttcggg	tgtgaactaa	aggctgacag	agattatcac	ttcaaggtgg	180
ataatgatga	aatgagcac	cagttatctt	taagaacggg	cagtttaggg	gctggagcaa	240
aggatgagtt	acatgttggt	gaagcagagg	cgatgaatta	tgaaggcagt	ccaattaaag	300
taacactggc	aactttgaaa	atgtctgtac	agccaacggg	ttctcttggg	ggctttgaaa	360
ttacaccacc	tgtggtctta	cgggtgaagt	gtgggttcagg	gcctgtgcat	atcagtggac	420
agcacttagt	agccgtggag	gaagatgcag	agtcagaaga	ggaggaggag	gaggaggtga	480
aactcctgag	tatatctgga	aagcgttctg	cccctggaag	tggtagcaag	gttccccaga	540
aaaaagtga	gcttgctgct	gatgaagatg	aagatgatga	tgacgatgac	gatgatgatg	600
atgatgaaga	tgatgatgat	gacgattttg	atgaggaagt	tgaagaaaaa	gctccagtaa	660
agaaatctgt	acgagatact	ccagccaaaa	atgcacaaaa	atcgaaccaa	aatggaaaag	720
actcaaaacc	gtcaaacacca	agatcaaaaag	gtcaagaatc	cttcaaaaaa	caggaaaaaa	780
caccgaaaac	acctaaagga	cctagctctg	tagaagacat	taaagcaaaa	atgcaagcaa	840
gtatagaaaa	agggtggttcc	cttcccaaag	tggaagccaa	gtttatcaat	tatgtga	897

<210> 67
 <211> 372
 <212> DNA
 <213> Bovine

<400> 67

gagcaatcca	gaagaaaaag	aagaaagcag	gaggcataac	ctgtccagac	ttcaaataact	60
acaaagctac	agtaatccaa	atagcttggg	actggcacaa	aagcaggcat	gtggatcaat	120
gaatcagagc	agagagccca	gaaataagcc	cacacaccta	cagtcagtca	gtctttgaca	180
gaacagacaa	ggatctacaa	tggagaaacg	atggtctctt	tagcaagcgg	tgctgggaaa	240
gttgggctg	catgtgtgct	cagtcactaa	gtttagctgc	atataaatca	ataaagttag	300
acacagcctc	acaccatata	caaaaataaa	ctcaaatga	gttaaagact	taagcataag	360
acataacacc	aa					372

<210> 68
 <211> 545
 <212> DNA
 <213> Bovine

<400> 68						
gagaagttaa	aagaggcacc	agaaggaact	ttcttgatta	gagatagttc	gcattcagac	60
tacctactaa	caatatctgt	taagacatca	gctggaccaa	ctaattctcg	catcgaatac	120
caagatggga	aatttagatt	ggactctatc	atatgtgtca	agtccaagct	taaacaattt	180
gacagtgtgg	ttcatctgat	cgactactat	gttcagatgt	gcaaggataa	gcggacaggc	240
ccagaagccc	cccggaacgg	cactgtttac	ctttatctga	ccaagccact	ctacacatca	300
gcaccacccc	tgcagcatct	ctgtagactc	accattaaca	agtgtaccag	caccgtctgg	360
ggactgcctt	taccaacaag	actaaaagat	tatttgggaag	aatataaatt	ccaggtataa	420
gtgtttcttt	tttttctaaa	catgcctcct	atagaatatc	tccgaatgca	gctatgtaaa	480
agagaaccaa	atcttgagtg	acggctctgg	ataacctacg	cggaattcta	agaccagctt	540
gaagt						545

<210> 69
 <211> 770
 <212> DNA
 <213> Bovine

<400> 69						
gggagactgg	tgtttctcaa	cctggcatgg	tggtcacctt	tgctccagtc	aatgtaacaa	60
ctgaagtga	gtctgtaaaa	atgcaccatg	aagcattgag	tgaagccctt	cctggggaca	120
atgtgggctt	taatgtcaaa	aacgtgtcgg	tcaaagatgt	ccgtcgtggc	aatgtggctg	180
gtgacagcaa	aatgatcca	cccatggaag	ctgctggctt	cacagctcag	gtgattattt	240
tgaaccatcc	aggccaaatc	agtgtctggat	atgcacctgt	gctggattgt	cacacagctc	300
acattgcttg	caagtttgct	gagctgaagg	agaagattga	tcgtcgttct	gggaaaaagc	360
tggaagatgg	ccctaaattc	ttgaaatctg	gtgacgctgc	catcgttgat	atggttcctg	420
gcaagcccat	gtgtgtcgag	agcttctctg	attatcctcc	cctgggcctg	tttgetgtgc	480
gtgacatgag	acagacagtc	gctgtgggtg	tcatcaaagc	agtggacaag	aaggcagctg	540
gagctggcaa	ggtcaccaag	tctgcccaga	aagctcagaa	ggctaaatga	atattatccc	600
caatacctgc	caccccagtc	ttaatcagtg	gtggaagaac	ggctcagaa	ctgtttgtct	660
caattggcca	tttaagttta	atagtaaaag	actggttaat	gataacaatg	catcgtaaaa	720
ccttcagaag	gaaaggagaa	tgtttttgtg	gaccatatgt	tttgtgtgtg		770

<210> 70
 <211> 591
 <212> DNA
 <213> Bovine

<400> 70						
ggacctcgac	gccctgggtgc	agttcctgtc	catcggaacc	ctgctggcct	acaccttcat	60
ggccatcagc	gtgcttgtgc	tgcggttcca	gacggcctct	cagtcctcgt	cgcccagcct	120
ggcggctcc	ggcccgaagg	ccaaggagta	cagctccttc	tctgaccact	tggagctggg	180
gggcgcaggg	cacggccccg	agccggggcg	gctgcggcca	gccctgaggg	cctacctggg	240
cttcctggac	aggggcagcc	ccggcgcgcc	cgtgcgcggg	gccgtctgcg	ggctggtggg	300
ctccgccatc	gccctgggct	gcgtgctgat	gctcgggcac	tcggctcctac	gcctccccct	360

ctggggcttc	ctcctgctgc	tgctgtgcag	cagcgtcacg	tttctgctca	gtctcctcgt	420
cctggggggcc	caccagcagc	aacgcctgaa	ggacaccttc	cagatgcccc	tggtgcccct	480
gattccagct	ctgagcatcg	tcctcaactt	ctgcctcatg	ctgaagctga	gctacctgac	540
ctgggtgcgc	ttcaccatct	ggctgctgat	aggactcttg	gtgtattttc	g	591

<210> 71
 <211> 373
 <212> DNA
 <213> Bovine

<400> 71						
ttctacgtgt	cacagcctgg	aagttcagtg	gtcacttctc	tttccccagg	agaagctgta	60
aagaaacaca	ttggtttgct	gcgtattaaa	ggaaggaaga	tgaatatgca	gaaaattcct	120
ctccgcacag	tgaggcagtt	tttcatggaa	gatgttggtc	tggtgatca	tccagacatt	180
tttaacccag	ataatcctaa	agtaacacaa	gtcatacaga	acttctgctt	ggagaagggt	240
gaagaaatgc	ttgaaaatgc	agaacgggaa	cgtctgggaa	attctcaaca	gccagagaag	300
cctcttatac	gactgcgagt	ggactatagt	ggaggctttg	aaccattcag	tgttcttcgc	360
tttagccaga	aat					373

<210> 72
 <211> 344
 <212> DNA
 <213> Bovine

<400> 72						
atcctaccat	gttacaggac	cctgatgtca	gagagttctt	ggaaaaagaa	gagctgccac	60
gtgetgtggg	taccagaca	ttgagtggcg	ctggtctcct	caagatgttc	aacaaagcta	120
cagatgcggg	cagcaaaatg	accatcaaga	tgaatgaatc	tgacatttgg	tttgaggaga	180
agctccagga	ggtagagtgt	gaggagcagc	gcttacggaa	actgcatgcc	gttgtagaaa	240
ctctagtcaa	ccacaggaaa	gagctagcgc	taaacacagc	ccagtttgcc	aagagtctcg	300
ccatgcttgg	gagctctgag	gacaacacag	cactgtcacg	ggct		344

<210> 73
 <211> 531
 <212> DNA
 <213> Bovine

<400> 73						
cagattagca	gacttgaaga	aagagaagcg	gaactgaaga	aagaatataa	tgctttgcat	60
cagagacaca	ctggatgata	cataattata	tggaacactt	agaaagaaca	aaacttcata	120
agatctcagg	gagtgatcaa	ctagaatcca	cagctcatag	tagaattaga	aaagaacgtc	180
ctatatcggt	agggattttc	cctttacctt	ctggagacgg	attgcttacg	cctgacactc	240
agaaagggtg	cgagacccct	ggatcagaac	aatggaaatt	tcaggaatta	agtcaaccac	300
gttctcatat	cagtctgaag	gatgaacttt	ccgatgttag	ccaggaggga	tctaaagcca	360
ccactccagc	gtcgacagct	gcttcagatg	tggcagcaac	acctagcgat	actcccttac	420
atgaggagaa	cggaggggtt	gtggagggtt	cagatacacc	cgataagtca	gagataagca	480
agcatatctc	catcccattg	acagaaacga	ataaaacata	aggagcatcg	g	531

<210> 74
 <211> 658
 <212> DNA
 <213> Bovine

<400> 74						
agcccttctt	tttgtcccaa	gacgagctcc	ttttgacctg	tttgaaaaca	gaaagaagaa	60
gaacaacatt	aagttgtatg	ttcgcagagt	attcatcatg	gataactgcg	aggagctaata	120
ccctgaatac	ctgaatttca	ttagagggtg	ggtggattct	gaggatcttc	ctctgaacat	180

ttcccggtgag	atgttgcaac	aaagcaaaat	tttgaaagtt	atcaggaaga	atgttggtcaa	240
aaagtgtctg	gaactcttca	ctgaactggc	agaagataag	gagaactaca	agaagtttta	300
tgagcagttc	tctaaaaata	ttaagcttgg	aatacatgaa	gattctcaaa	atcggaagaa	360
gctttcagag	ctgttgaggt	actatacttc	tgcttctggt	gatgagatgg	tttctctcaa	420
ggactattgc	acaagaatga	aggaaaacca	gaaacacatc	tattacatca	caggtgagac	480
caaggaccag	gtggccaact	cggccttcgt	ggagcgcctc	cggaagcacg	gcttggaagt	540
gatctacatg	atcgagccca	ttgatgagta	ctgtgtgcag	cagctgaagg	agtttgaggg	600
gaagacctta	gtgtcagtca	ccaaagaggg	cctggaactt	tcagaagatg	aggaagag	658

<210> 75

<211> 615

<212> DNA

<213> Bovine

<400> 75

tggaaaccct	cgtacgaacg	gcatgtgttc	agtgtgctat	aaagaacatc	ttcaaagaca	60
gaatagtagt	aatggtagaa	taagcccacc	tgcgcttctt	gtcacaagtc	tgtctgagtc	120
cttaccagtc	cagtgcacag	acggtagtgt	cccagaggct	cagtcagcgc	tagactcaac	180
agcttcatct	gtgcagccaa	gccctgtgtc	aaatcagtca	cttttatcag	aatcagtagc	240
gtcttcccaa	gtggacagta	catctgtgga	caaagcaata	cctgaaacag	aagacctgca	300
agcttcagta	tcagaaacgg	cacagcaggc	atctgaagag	caaagcaagt	ctcttgaaaa	360
acaaaaacag	aaaaagaatc	gctgtttcat	gtgcagaaag	aaagtgggac	ttactggggt	420
tgaatgccgg	tgtggaaatg	tttactgtgg	tgtacaccgt	tactcagatg	tacacaattg	480
ctcttacaat	tacaaagctg	atgctgctga	gaaaatcaga	aaagaaaatc	cagtagttgt	540
tggtgaaaag	atccagaaga	tttgaactcc	tgatggaata	caaaatcctt	tgaccatctg	600
caactaaaa	actga					615

<210> 76

<211> 214

<212> DNA

<213> Bovine

<220>

<221> misc_feature

<222> (1) ... (214)

<223> n = A,T,C or G

<400> 76

gaaacattcc	agcaggcaca	accgtggaca	cgaaaateac	ccacccaact	gagtttgact	60
tctacctgtg	tagtcatgct	ggcatccagg	gaacaagcag	gccctcgcac	taccatgtgc	120
tctgggatga	caatcgcttc	tcttccgacg	agctgcagat	cctcacctac	cagctgngtc	180
acacctacgt	gcgctgcaca	cgctccgtgg	tcat			214

<210> 77

<211> 184

<212> DNA

<213> Bovine

<220>

<221> misc_feature

<222> (1) ... (184)

<223> n = A,T,C or G

<400> 77

ctgccctctt	ggatgtgcaa	ttcagaaaca	ccaccattgg	gctgaccgtg	ttcgccatca	60
aaaaatacgt	ggtcttcttg	cggctcttcc	tggagacggc	ggagaagtac	ttcatggngg	120
ggcacaaggt	catctactac	gtcttcaccg	accggccggc	ggacgtgccc	cagatcgccc	180

tcca

184

<210> 78

<211> 565

<212> DNA

<213> Bovine

<400> 78

accaggcaac	ccagaaagcc	aggcgtggag	actgatcctg	cgggaggaaa	gggttcatca	60
tggcggatga	tctaaaacga	ttcctgtata	aaaaattacc	gagtgttgag	gggctccatg	120
ctattgttgt	gtcagataga	gatggagtgc	ctgtcatcaa	agtggccaat	gataatgctc	180
cagagcatgc	tttgagacct	ggtttcttat	caacttttgc	ccttgcaaca	gaccaaggaa	240
gcaaactcgg	actttcaaaa	aataaaaagta	tcattctgtta	ctataatacc	taccagggtg	300
ttcaattcaa	tcgtttacct	ttggtagtga	gtttcatagc	cagcagcaat	gctaatacag	360
gactaattgt	cagcctggaa	aaggaacttg	ctccattatt	tgaagaattg	agacaagttg	420
tgggaagttt	ttaatctgga	gttttcttca	tcatatcaga	cacaatatca	atccagcaat	480
ctttaggcca	cagtgcact	tgtatccatg	tactcaagga	ccccctttt	ccactttact	540
ctagaaaaag	agccttacag	ataga				565

<210> 79

<211> 323

<212> DNA

<213> Bovine

<400> 79

ggacttcggc	acgatgaagg	acaagatcgc	agcgaacgag	tacaagtcag	tcacggagtt	60
caaggcagat	ttcaagctga	tgtgtgacaa	cgcgatgaca	tacaacaggc	cagacaccgt	120
gtactacaag	ttggccaaga	agatcctgca	cgctggcttc	aagatgatga	gcaaagagcg	180
gctcttagct	ctgaagcgca	gcatgtcgtt	tatgcaggac	atggatttct	ctcagcaggc	240
ggctcttctg	ggcaacgaag	acacggctgc	cgaggagcct	gtccccgagg	tcgtgcctgt	300
gcatgtagag	acggccaaga	agt				323

<210> 80

<211> 450

<212> DNA

<213> Bovine

<400> 80

caagatctga	acagcacagc	cgccccacac	ccccgcctgt	cccagtacaa	gtccaagtac	60
agttccttgg	agcagagtga	gcgggcggcg	cagttactgg	aactgcagaa	attaaagcgt	120
ctggattatg	tgaaccatgc	cagaagactg	gctgaagatg	actggacggg	gatggagagt	180
gaagaagaag	aagaaaagaa	agatgatgag	gaaatggacg	ttgacactgg	caaggagtta	240
ccaaaacgct	atgctaata	attaatgctg	tcagagtggg	taattgacgt	cccttcagat	300
ttggggcagg	aatggattgt	ggtcgtttgc	cctgtttgaa	aaagatccct	tatcgtggct	360
tcccagggtc	ttaccagtgc	ctacaccagg	agtggctact	gggtcaaac	gtttccttcc	420
cttctgccag	gaggcaacag	gcgaaactca				450

<210> 81

<211> 373

<212> DNA

<213> Bovine

<400> 81

aatccaggaa	ctacgaagag	gatctcaagc	agctaataatt	tattgcatta	acttcaatca	60
ggatgcttcc	ctcatctgtg	tgtccagtga	ccacggcacg	gtgcacattt	ttgcagctga	120
agatccaaaa	aggaataaac	aatcaagttt	ggcatcagcc	agtttccttc	caaaataactt	180
cagttccaag	tggagtttct	ccaagtttca	ggccccctca	ggctctccat	gcatttgtgc	240

ctttgggaca	gagccaaacg	ctgtcattgc	gatctgtgcg	gaaggcagct	actacaagtt	300
tctgttcaac	cccaaaggag	agtgcgtccg	ggacgtgtat	gcccagttcc	tggagatgac	360
cgatgacaag	ctt					373

<210> 82
 <211> 369
 <212> DNA
 <213> Bovine

<400> 82						
gggaagtgct	gtggcgaaga	gctcaggtgt	gggcaggtca	cccgggcagc	ggagcccttc	60
ccaaggtgga	tgtggaacag	cttgtcctct	gctagagccg	ggcctgggct	gagcaccagc	120
cacaggaccc	tctggaccct	gggactgtgg	ccttgactcc	tgtacaact	caagtggggc	180
tctgcagttt	ctccagaaga	attcctctaa	gtatcacttc	agacgcacca	agatgttgcc	240
ggttagcgg	gggttccaca	ccgcctcat	ggagccggcc	gtggagccc	tgggtgcaagt	300
gttaaaggcg	attgatgtca	agaagcccct	ggtgtccgtg	cactcgaacg	tcgatgggaa	360
caaatacat						369

<210> 83
 <211> 601
 <212> DNA
 <213> Bovine

<400> 83						
acgatacaga	gaagattagc	atggcccctg	cgcaaggatg	acacgcaaat	tcgtgaagcg	60
ttccatattt	ttgtgacgtc	cctgctaagg	ccattgccag	tgccctacat	gggctttgtg	120
cccagatctt	gtcggagcga	gtggaggtca	gtggtgatcc	cccttgctgc	tcactagacc	180
ccattacccc	tgaagacctg	cctcgacaag	tggagctact	ggatgctgtg	agccaggctg	240
ctcagaagta	cgaggcactg	tacatgggga	ccctgccagt	caccaaagcc	atgggcatgg	300
atgtgctgaa	cgaggccatt	ggcagaggct	ggtgcagagg	aggaaccact	gtggcagtgt	360
cctgtgcgcc	tcgtgacctt	tattgggtgt	ggtcgtgacc	cacacacctt	tgggtctcatt	420
gccgacctgg	gccatcagag	cttccagtgt	gcagccttct	ggtgccagcc	ccatgcaggg	480
ggactctctg	aagctgtgca	ggcggcttgc	atggttcaat	accagaagtg	tcttgtggcc	540
tctgagcttc	gaggcaaggc	ctgggggtgcc	aagcccgcgc	acgcctgcgg	ttaagcggac	600
a						601

<210> 84
 <211> 405
 <212> DNA
 <213> Bovine

<400> 84						
cgaagactca	ggcgcgtgcc	ggccaggcct	cccgcctgcc	tagtccgcgt	tcctcggcgc	60
ccctcgtccg	cgccctgccc	gcgcctcccg	tctgcgcacc	ccagccgccc	gccaggcccc	120
cagccgctct	ccaggccgcc	aggccccgcg	cccgaccccc	aggacaggca	cgcgccccgc	180
aggccgcccc	ccgcccgcgc	cgccatgggg	gtagaggggt	gcaccaagtg	catcaaatac	240
ctgctcttcg	tcttcaattt	cgtcttctgg	ctggcaggag	gtgtgatact	gggcgtggcc	300
ctgtggcttc	gccatgacce	gcagaccacc	aacctcctgt	atctggagct	cggagaccgg	360
cccgccecca	acaccttcta	tgtgggcata	tacattctta	tcgcc		405

<210> 85
 <211> 361
 <212> DNA
 <213> Bovine

<400> 85						
atcttcctgg	gctccaaaat	cactgcagat	ggtgactgca	gccatgaaat	tgaaagggtgc	60

tttctccttg	gaagaaaact	tatgaccaac	ctagacagca	tattaaaaag	cagagacatt	120
actttgccaa	caaaggtcca	tccagttgaa	gctatggttt	ttccagtagt	catgtatgga	180
tgtgagagtt	ggaccataaa	gaaagctgag	taccgaagaa	ttgactcttg	agagtecctt	240
ggactgcagt	ggtacctagc	agatttgctg	gatatgttag	tatgataatg	aaatgctaag	300
ctaaatgctc	tgagaagggt	gatccaaaga	ttagacactc	tctctcttcc	tcattctgat	360
g						361

<210> 86

<211> 918

<212> DNA

<213> Bovine

<400> 86

gagaagcgca	gcgagaggttt	tgctgggtttc	ggaccccagc	ggccggatgg	tgaaatcctc	60
cctgcagcgg	atcctcaaca	gccactgctt	cgccagagag	aaggaagggg	ataaaccag	120
cgccaccgtc	cacgccaccc	gcaccatgcc	gctccttagc	ctgcacagcc	gcgagggccg	180
cagcagtgag	agttccaggg	tctccatcaa	ctgctgtagt	aacctgggtc	cagggcctcg	240
gtggtgctcc	tgatgtccct	caccaccccc	tgaagatccc	aggtgggcca	gggaatagtc	300
agagggatca	caatctttca	gctaatttat	tttactctga	taatcggtcg	aatgtaacag	360
aggaactaac	gtctaataac	aagacgagga	tttttaatgt	ccagtcacag	ctcacagagg	420
ccaaacatat	taactggaga	gcggtgctga	gcaacagctg	cctctacgtc	gagatcccgg	480
gcggcgctct	gcccagaggg	agcaaagaca	gcttcgcagt	tcttcttgag	tttgctgaag	540
agcagctcca	tggtgaccac	gtcttcattt	gcttccacaa	gaaccgtgat	gatcgagccg	600
ccttgctccg	taccttcagc	tttttgggct	ttgagattgt	gagaccgggg	catccccttg	660
tcccgaagag	acccgacgct	tgcttcatgg	cctacacgtt	tgagagagag	tcctcggttg	720
aggaggagta	gtgtgacgac	cctggggcca	ctcagggggc	tcagttgcag	tccttgcgt	780
gtgtgctttg	cgccgtgcct	ggtgcgggtg	gtgtgatcaa	ctgcgctgac	cagcgtcagc	840
ctgctcacct	gctggtttgt	ccgcatgttg	taattgtgca	aataaacgct	cactccaaaa	900
aaaaaaaaaa	aaaaaaaa					918

<210> 87

<211> 584

<212> DNA

<213> Bovine

<400> 87

cgccgeagcc	cgacccggct	cctcggtgga	gagaagatgg	tgggcccggaa	cagcgccatc	60
gccgcggcgg	tgtgcggggc	ccttttcatc	ggttactgca	tttacttcga	cccgaagag	120
acggagtgc	cccaacttca	agaacagget	gcgagaacga	agaaagaaac	agaagcttgc	180
caaggagaga	gctgggcttt	ccaagttacc	tgaccttaaa	gatgctgaag	ccgttcagaa	240
attctttcta	gaagaataac	agcttgggtg	agaattacta	getcaaggtg	aatatgagaa	300
gggtgtggac	catctgacaa	atgcgattgc	tgtgtgtgga	cagccacagc	agttactgca	360
agtattgcaa	caaactcttc	cgccaccagt	gttccagatg	cttctgacta	agctcccaac	420
aattagtcag	agaattgtaa	gtgctcagag	cttggctgaa	agatgatgtg	gaatgagaaa	480
caaatgtcaa	catactgata	tcaattaaaa	catattttta	aaatettatc	ttaaaagatg	540
atcggtctct	tgggagtaaa	ggcaattaag	cttgggttcg	gctg		584

<210> 88

<211> 456

<212> DNA

<213> Bovine

<400> 88

cttaaagtgc	catgagaaaa	tttgcatact	gcaaggtggg	cctagccacc	tccttgattt	60
gggtactctt	ggatatgttc	ctgctgcttt	acttcagtga	atgcaacaaa	tgtgatgaaa	120
aaaaagagag	aggacttcct	gctgggggatg	ttctagagcc	agtacaaaag	cctcatgaag	180
gtcctggaga	aatggggaaa	ccagtcgtca	ttcctaagaa	ggatcaagaa	aagatgaaag	240

agatgtttta	aatcaatcag	ttcaatttta	tggcaagtga	gatgattgca	ctcaacagat	300
ctctaccaga	tgtagatta	gaaggggtga	aaacaaaggt	gtatccagat	aaccttccta	360
caaccagtgt	ggtgattggt	ttccacaatg	aggcttggag	cacacttctg	cgaactgtcc	420
atagcgtcat	taatcgctca	ccaaagcaca	tgctag			456

<210> 89
 <211> 381
 <212> DNA
 <213> Bovine

<400> 89						
cgggtgcccg	gcccgcacgg	ctacgcgcgc	gagttctccc	cgtaectgcc	gggcccactg	60
gcctgcgcgc	cctcgcagca	ctacggcatc	gcgggcagtg	gaactctgct	aatattggat	120
caaaatgaat	ctgggcttag	gcttttttaga	agctttgact	ggaatgacgg	tttgtttgac	180
gtgacctgga	gtgagaacaa	tgagcatgtg	ctggtcacct	gcagtggcga	cggctcctta	240
cagctctggg	ataccgccag	ggccacaggg	ccgctgcagg	tcttcaagga	gcacaetcag	300
gaggtgtaca	gtgttgattg	gagccaaacc	agaggtgaac	agcttgtggt	gtctggctca	360
tgggatcaaa	ctgtcaaact	g				381

<210> 90
 <211> 886
 <212> DNA
 <213> Bovine

<400> 90						
tacgtgtgtg	gacatggatg	aatctgcatt	gaccettggc	acgatagatg	tatcttattt	60
gccaaattct	tctgaatata	gcattgggtc	gtgtaagcat	gccaccgagg	aatgggggtga	120
gtgtgggtcc	aggcctactg	tcttcagatc	tgcaaccttg	aagtggaaag	aaagcctaata	180
gagccggaag	aggccctttg	tggaaggtg	ctgttattcc	tgtactcctc	agagctggga	240
taaatttttc	aacccagta	tcccgtcttt	gggtttgcgg	aatgttattt	atatcaatga	300
aacgcataca	aggtaaaaat	aaatttctta	tatttctaata	gcatgtcaag	agaaagactc	360
cataataacc	aaccagtgtg	ctttaagatg	aatctcttta	tatttttttt	gaagagttaa	420
tagggattata	acttctaaca	tataataactt	tatctaaaaa	ttggaacctg	agagacctat	480
tactattctc	ctgctgtatt	atataatatt	ttcatgagac	tatagatatt	acttagagggt	540
ttcttttaact	tatttatata	atgatgttgc	tgctgaaatg	tgccaaaatg	tgatagaaat	600
ttgtcggagg	agaggtgtag	gtttgaatgt	cttatgttat	attattattt	tatacttaaa	660
aaagtatcac	tttctgaaat	ctgcctgac	tatagagtga	gtattctttg	atttattact	720
ggcttaagtc	tttttttaga	attcttaactt	ccaaattcta	ggcatcagag	tgagagaaaa	780
agaggcttta	ttctcagtg	atttaggctg	ggggatgagg	aaggagggtg	aatgtctgca	840
agacaagagc	agaatgggag	ccaaaaccac	taccagtcct	tgtagt		886

<210> 91
 <211> 690
 <212> DNA
 <213> Bovine

<400> 91						
ggtaaacactc	tggtactgga	gccagctcag	ctcagcggag	cagatataaa	ccgagaaggg	60
caaactcatc	gagagggcgt	cttcgggacc	atggcgaatg	gatatacata	tgaagattat	120
caagacactg	caaaatggct	tttgtctcat	accgaacagc	gacctcaagt	ggcagtgatc	180
tgtgggtctg	ggtagaggag	tctgggtaac	aaattgactc	aagcccagac	ctttgactac	240
agtgaataac	caaactttcc	agaaagtaca	gtgccaggtc	atgctgggtc	actgggtgtt	300
gggatcttga	atggcagagc	ctgtgtgatg	atgcagggca	ggttccacat	gtatgaaggc	360
tatccgtttt	ggaagggtgac	attcccagtg	agggttttcc	ggcttctggg	tgtggagacc	420
ctagtgggtca	ccaacgcagc	tggaggggtc	aaccccaact	ttgaggttgg	cgatatcatg	480
ctgatccgtg	atcacatcaa	cctacctggg	ttcagtggtg	agaacctct	cagagggccc	540
aatgaggaaa	ggtttggagt	tcgtttccct	gccatgtctg	atgcctacga	ccgggatatg	600

aggcagaaag ctcacagtac ctggaacaa atgggggagc aaagagagtt acaggaaggc 660
acctacgtga tggtgggggg tcccaatttt 690

<210> 92
<211> 472
<212> DNA
<213> Bovine

<400> 92
ccagtcgaa cctctgactg gagtttttac cacagaggaa gttccagccc agcagtactt 60
ggaaattgat gaggtgacgc cagacagctt tcgagtgagc tggcaccgcg tgcggcgga 120
cgaggggcag cacaagctga tgtggatccc agtctacggg ggcagcaccc aagaagttgt 180
ccttcaagaa gaccaagact catatgttat cgaaggcctg gagcctggca ctgagtatga 240
agtctccctg ctggctgtac tggacgatgg gagtgagagt gaggttgta ctgctgttgg 300
gaccacactt gacagttttt ggacagaacc acctacgacc gaagaagccc ctaccagacc 360
tgtgacatca gttttccgca ccggaatcag gaacctgggt gtagatgctg agaccacttc 420
tagcctgcgg gtagcctggg acatttcaaa cagcagtgtg caagcaattc aa 472

<210> 93
<211> 431
<212> DNA
<213> Bovine

<400> 93
agcaatgatg ggctatgact agtgaaaaat tgcttaaagt aaattaacgt tcaaaatgct 60
atactttcaa aggccccggc aacagaccac ttcccagaat ggaaggcagg aacttctcgc 120
cagttccaag caaacctaga tcacaatccc ctggggaaga agagaattca ttaaataaag 180
actggtagct ttcttatgtt acccgaacag aggcagaagc ggctettaga aagataaacc 240
aggacggcac tttcctgggt agagacagct ctaaaaaac aatatccaat ccatacgttc 300
tcatgggtgt gtacaaagat aaagttttaca acatccaaat ccgttatcag gaagaaagcc 360
aagtttactt gttgggaact ggactccgag ggaaagagga ctttctgtct gtgtcagata 420
ttatcgacta c 431

<210> 94
<211> 561
<212> DNA
<213> Bovine

<400> 94
gccagcgcta ggaaggctgc acaggtgacc atccagtctt cagggacatt ttccacaaaa 60
ttccaagtgg aaaacagcaa ccgcctgtta ctacagcagg ttccattgcc agaagtgcct 120
ggagagtact gcatgtcagt cacaggagaa ggatgtgttt acctccagac atctttgaaa 180
tacaatatcc tcccgaaaaa agatgagttc ccatttgctt tggaggtgca gactctgccc 240
caaacttgtg atggacccaa agcccacacc agcttccaga tctcactgag tgcagttat 300
attggaagcc gtccagcctc caatatggca attgttgacg tgaagatggg atctggcttc 360
attcccttga aaccaacagt gaaaatgcta gaaagatcta acgtgagccg aacagaagtt 420
agcaacaacc atgttttgat ttatctggat aaggtgacaa atgagaccct gaccttgacc 480
ttcacagttc tgcaagacat cccagtaagg gatctgaaac ctgccatagt gaaagtctat 540
gactattatg agacagatga g 561

<210> 95
<211> 556
<212> DNA
<213> Bovine

<400> 95
acgaccactt ggaggccaag aaacccttgt ccactcccag cctgactact gaggattggc 60

ttgtccagaa	ccatcaagac	ccatataaag	tagaggaggt	ctgcaaagcc	aatgagccct	120
gtacaagttt	tgcagagtgt	gtatgtgatg	aaaattgtga	gaaggaagct	ctgtgtaa	180
ggcttctgaa	gaaagaagga	aaggataaaa	atggtatgcc	tgtggatcca	aaacctgaac	240
ctgggaaaca	caaggattcc	ctgaacacgt	ggctctctcc	gtccggaaga	gaggcagcag	300
agcaagctcg	ggcaccacag	gcgacggctg	ctggagttgc	tgattccttc	caagtcataa	360
ggagcagtc	cttgtcagag	tggctcatga	ccccctcaca	caaagaagga	tgtcccaaca	420
aggaagcgcc	tcttacagag	gacagggcca	gcaaacaaaa	gctcacaagc	cccttggcca	480
ctgcctggtg	tccctttaac	acagctgact	gggtcttgcc	agcaaagaag	acaggaaatc	540
ttagccagtt	atcctc					556

<210> 96

<211> 487

<212> DNA

<213> Bovine

<400> 96

gtgaaagtag	aatctctcat	gaaaacggaa	caatattatg	ctcaaaaggt	agcacctgct	60
atggcctttg	ggagaaatca	aaaggggaca	tcaatctggt	aaaacaagga	tgttggtctc	120
acattggtga	tccccaggag	tgtcactatg	aagaatgtgt	agtaactacc	acccccacct	180
caattcagaa	tggaaacatac	cggttctgct	gctgtagcac	agacttgtgt	aatgtcaact	240
ttactgagaa	ttttccacct	ccagacacaa	caccactcag	tccacctcat	tcattttaacc	300
gagatgagac	aataatcatt	gcattggcat	cagtctctgt	attagctggt	ttgatagtgt	360
ccttatgctt	tggatatagg	atgctgacag	gagaccgcaa	acaaggctct	cacagtatga	420
atatgatgga	ggcagcagca	tcagagccct	ctcttgacct	aaataatctg	aaactgctgg	480
agctgat						487

<210> 97

<211> 258

<212> DNA

<213> Bovine

<400> 97

gaaaagcggg	cataacctcca	gtccaggttc	ccccagctca	acgaaaccag	ctttgccaac	60
tcccgggaca	catectttga	gcagcatgtg	ctgtggcaca	cagccgggaa	gggtgctgac	120
ctggtcctca	actccctggc	ggaagagaag	cttcaggcca	gtgtgcggtg	cctggcccag	180
cacggtcgat	tcctggaaat	tggcaaattt	gacctttcca	aaaaccaccc	cctgggcgct	240
gggcacccac	cctatttg					258

<210> 98

<211> 460

<212> DNA

<213> Bovine

<400> 98

tgtaaagtgcg	gccggtggac	caaccccaag	ccagagaggt	ctgtctgacc	tggttttgtg	60
tggaccagcg	gcgaaccagt	gtgcagggcc	ggccaaggac	aggggtggact	gcggctaccc	120
cgaggtcacc	cccagagcagt	gcaacaaccg	cggctgctgc	ttcgactcca	gcatccacgg	180
ggtgccctgg	tgtttcaagc	ccctgcagga	agcagaatgc	accttctgaa	gccacgtggc	240
cgcccgaac	ccagggaggg	gatctccgta	cttgggtacc	ctgeccgccc	acccagtgtc	300
catccctctg	cttctctcaa	actgctcctg	gccaggcctg	aaccaaattg	ctggggcctg	360
atgtctttaa	gaataaagct	cccgtgctca	gcatgaggac	aggtcttcat	tcctaaaaaa	420
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa			460

<210> 99

<211> 234

<212> DNA

<213> Bovine

<400> 99
ctcaggacca acctcagaaa agccagctcg cagtcatcca tggaccctg atgattccac 60
agataccaat ggatcagata attccatccc aatggcatat cttacactgg atcaccaact 120
acagcctcta gcaccatgcc caaactccaa agaactctatg gcagtgtttg aacagcattg 180
taagatggca caggaataca tgaaagtcca aacagaaatt gcattgttat taca 234

<210> 100
<211> 377
<212> DNA
<213> Bovine

<400> 100
tgeccatcat cctagtgggc aacaaaagcg acctggtgcg ctctcgcgag gtctccttgg 60
acgagggccg ggctgtgcc gttgtctttg actgcaagtt catcgagacg tcggctgcac 120
tgcaccacaa cgtccaggca ctgttcgagg gtgtcgtgcg tcagatacgc ctgcgcaggg 180
acagcaaaga ggccaacgcg cgtcggcaag cgggtacccg gcggcgagag agcctgggca 240
agaaggcgaa gcgcttcctg ggcgcctcgc tegctcgaaa cagccgcaag atggccatgc 300
gtgccaaagtc caagtectgc catgacctat cgggtgctcta gaccctgggg cacttgcctgt 360
attgtgcaaa cagatgg 377

<210> 101
<211> 584
<212> DNA
<213> Bovine

<400> 101
ctgttttgta gccagcattc ttctccttgc tgttgctcgt tgcattctgt ttctcatcat 60
ttggctcata actggaggaa ggcaccattt ttggttcttg ccaaactctga ctgcggacgt 120
gggettcatt gactccttca gacctctgta cacacatgaa tacaaaggac caaaagcaga 180
cttaaagaaa gatgagaaat ctgaaaccaa aaagcaacag aagtcgcgaca gtgaggaaaa 240
gtcagacagt gagaaaaagg aagatgagga ggggaaagta ggaccaggaa atcacggaac 300
agaaggctca ggtggagaac ggcattcaga cacagacagt gacaggaggg aagatgaccg 360
atcccaacac agtagtgga atgggaatga ttttgaaatg atcacaaaag aggaactgga 420
acagcaaaca gatggggatt gtgaagagga ggaggaagaa gacaacgatg gagaaacaac 480
taaactctca catgaaaaat cataactctga ctaatttggg gactaaatat gtgcaagagg 540
ttggattttc tatgttggct gatcatcata atgtacacat gaca 584

<210> 102
<211> 321
<212> DNA
<213> Bovine

<400> 102
ctgtgaaggc cctgaagagg aaagtgagga cgaccctcag cttgaaggca gagatcctga 60
tatttggcac gttggtttta agatctcgtg ggacatagag acacctgggt tggcgatacc 120
ccttcaccaa ggagactgct attttatgct tgatgatctc aatgctaccc accaactctg 180
tgttttggct ggtttaccac ctcggtttag ttccaccac cgagtggcag agtgctcaac 240
agggaccttg gagtacatct tacagcgtcg ccaggtggcc ctgcaaaatg tccgcgagga 300
ggcagacaac ggtgaaatct c 321

<210> 103
<211> 381
<212> DNA
<213> Bovine

<400> 103

tgatgctgat	ggtgctgtgc	cctccctctgg	cctggggccag	ggagatccaa	ccacatttcc	60
tggagtattc	tacgagcgag	tgtcatttct	tcaacgggac	cgagcgggtg	cggttcctgg	120
acagatactt	ccataatgga	gaagagttcg	tgcgcttcga	cagcgactgg	ggcgagtacc	180
gggcggtgac	cgagctaggg	cggccggacg	ccgagtactg	gaacagccag	gagatcctgg	240
agcgggcgcg	ggccgcggtg	gacacgtact	gcagacacaa	ctacgggggc	gtggagagtt	300
tcactgtgca	gcggcgagtg	gagcctacag	tgactgtgta	tcctgcaaag	actcagcccc	360
tgcagcacca	caacctcctg	g				381

<210> 104
 <211> 512
 <212> DNA
 <213> Bovine

<400> 104						
ggcagcagtt	aacattagca	gaataccatg	aacaagaaga	aatcttcaaa	ctcagattag	60
gtcatcttaa	aaaggaggaa	gcagagatcc	aggcagagct	ggaaaggcta	gaaagggtta	120
gaaatctaca	tatcagggaa	ctaaaaagga	tacataatga	agataattca	caatttaaag	180
atcatccaac	gctaataatg	agatatttgt	tgttacatct	tttgggtaga	ggaggtttca	240
gtgaagttta	caaggcattt	gatctaacag	aacaaagata	cgtagctgtg	aaaattcacc	300
agttaaataa	aaactggaga	gatgagaaaa	aggagaatta	ccacaagcat	gcatgtaggg	360
aataccggat	tcacaaagaa	ctggatcatc	ccagaatagt	taagctgtat	gattactttt	420
cactggacac	tgactcgttt	tgtacagtac	tagaatactg	tgagggaaat	gatctggact	480
tctacctgaa	acagcacaaa	ttaatgtcgg	ag			512

<210> 105
 <211> 873
 <212> DNA
 <213> Bovine

<400> 105						
ccaccgtacg	ccggtgctgg	gagtgcctgc	cttctcttgt	cttgaaaacc	tcctcttttg	60
acccagcacc	gccgtcctca	cggatgatgt	ggactcagtg	acacacagca	ccttcctgcc	120
caacacgtcc	ttctgcgacc	ccctgatgtc	gtggactgac	ctgttcagca	atgaagagta	180
ttaccctgcc	tttgagcatc	agacagcttg	cgactcctac	tggacatccg	tcaccccgga	240
atactggacg	aagcgccacg	tctgggaatg	gctccagttc	tgctgtgacc	agtacaagct	300
ggacgccaac	tgcattctct	tctgccattt	caacatcagt	ggcctgcagc	tgtgcggcat	360
gacacaggag	gagttcatgg	agcggccggc	gtctgtgggg	agtatctgta	ctttatcctc	420
cagagcatcc	gctcacaagg	ttactccttt	tttaatgatc	ctgatgagac	caaggccaag	480
cctccagagt	tctcatctat	gggaatttgt	gcgagatctg	cttctatctc	ctgaggaaaa	540
ctgcggcatt	ctggaatggg	aagctagggg	acaaggattt	tttcgggtgg	ttaaatcaga	600
agccctggcg	aagatgtggg	gacaaaggaa	gaaaaatgac	agaatgacgt	acgaaaagct	660
gagcagagct	ctgaggtact	actataaaac	cggaaatttg	gaacgggttg	accgaagatt	720
agtgtacaaa	tttggaaaaa	atgcacatgg	gtggcaggaa	gacaagctat	gatctgctcc	780
atcatccagc	tcattgtaatg	gatttctgtc	ttttcaaaca	atagattgca	atagacattg	840
gaaagtcctt	taaaaaaaaa	aaaaaaaaaa	aaa			873

<210> 106
 <211> 364
 <212> DNA
 <213> Bovine

<400> 106						
cagataactaa	aggatttttg	agtgcctaatt	tgcttgagga	cttgcctctg	caagagcctc	60
agtcacctca	caagctcaat	gcaggctttg	acctggctaa	gggaggtgca	ggtaaagtaa	120
acctgcccaa	agagctagct	gcagatgctg	tgaacatatt	acctgcctct	ctggacctct	180
cccctctgtt	gggcttctgg	cagctgcctc	ctgctacca	gaatgccttt	gggagtagtg	240
gtcttgcttg	ggggctgggg	aatctctgcc	gcataagctg	ggctgtctgg	ggcagcaagc	300

cccaagaccc ctcactagcc atgagcacta tgagcctggg ccagcttccc ctgcacccat 360
cccc 364

<210> 107
<211> 1032
<212> DNA
<213> Bovine

<400> 107
ggccgcggtg gaagcgggtg cgccgggtcgc ctctctgagt tatecagttc catccttgtc 60
gctgcggcga caccgcatt ctccgtcgc atgactgaac agatgaccct tcgtggcacc 120
ctcaagggcc acaacggctg ggtgacccag atcgtacca ctcccagtt cccggacatg 180
atattgtccg cctctcgaga taagaccatc attatgtgga agctgaccag agatgagacc 240
aactatggta tcccacagcg tgctcttcgg ggctcactccc actttgttag tgatgtggtc 300
atttctctag atggccaatt tgccctctca ggctcctggg atggaaccct tcgcctttgg 360
gatctcacia cgggcaccac cactcgcga tttgtaggcc ataccaaaga tgtgctgagt 420
gtggccttct cttctgacaa ccggcaaatt gtctctggct cccgagacaa aaccatcaaa 480
ctatggaata ctctgggtgt atgcaagtat actgtccagg atgaaagcca ttcagagtgg 540
gtgtcttgtg tccgcttctc gcccacagc agcaatccca ttattgtttc ctgtggctgg 600
gacaagctgg tcaaggtatg gaacttggca aattgtaagc tgaagaccaa tcacatcggc 660
cacacaggct acctgaacac tgtgaccgtc tctccagatg gatccctctg tgcttctgga 720
ggcaaggatg ggcaggctat gttgtgggac ctcaatgaag gcaagcacct ttacacacta 780
gatggtgggg acatcatcaa cgccctgtgc ttcagtccta accgctactg gctctgtgct 840
gccacgggtc ctagcatcaa gatctgggac ttggagggca agatcattgt agatgaactg 900
aagcaagaag ttatcagtac cagcagtaaa gcagagcctc cccaatgtac ctctctggcc 960
tggtctgctg atggccagac actgtttgct ggctacacgg acaacctggg gcgagtgtgg 1020
caggtaccat cg 1032

<210> 108
<211> 350
<212> DNA
<213> Bovine

<400> 108
ttactacaca accccgatct acaggttcag gatgaaatgc cacctctgtg tcaactacat 60
cgagatgcag acggaccccg ccaactgtga ctacgtgatt gtgagcggcg cccagcgcaa 120
ggaggagcgc tgggacatgg aggacaacga acagggtgctg accacagagc atgagaagaa 180
gcagaagctg gagatggacg ccatgttccg cctggagcat ggagaggctg accggagcac 240
gctcaagaag gccctcccca ccctgagcca catccaggag gccagagcgc cctggaagga 300
cgacttcgcc ctcaacagca tgcttcggaa aagggtccgg gaaaagaaaa 350

<210> 109
<211> 576
<212> DNA
<213> Bovine

<400> 109
aatagagcgc aagctgcaac ctgcgtttgg ctgtaacca ggagtaacgt cagaaacagg 60
tgagaatgac caccttaact caccgggccc ggctgtactg aagtggggaa gaattctgaa 120
aagaaggtag aaagtgagga aaacgtgaat caagaccgaa atcaagacaa tgaggacatt 180
ggagactcta aggatatccg cctcaccctt atggaagaag tattgctcct gggactaaaa 240
gataaagagg gttacacatc tttctggaat gactgcatat catctggcct gcgaggcggc 300
atcctgatag agctggccat gcgaggctga atctatctag aacccccaac catgcgtaag 360
aagcgactac tagacagaaa ggtactgcta aagtcagaca gcccaacagg tgatgtttta 420
ctggatgaaa ctctcaaaca catcaaggca attgaacca cagaaactgt ccaaactgg 480
atagagctac tcaccgggtg gacctggaac cctttcaaat tacagtacca gctgagaaat 540
gtaagaaaga gaattgcaaa acctagtaga gaaggt 576

<210> 110
 <211> 533
 <212> DNA
 <213> Bovine

<400> 110
 gggggaacgg tctctgtttt tctgcttctt cgggctctct cctcgaccgt ggccgcccac 60
 cctcggaagc agtccgaaca tgtccaacat ggagaaacac ctgttcaact taaagttcgc 120
 ggccaaagaa ctgggcagga gtgctaaaaa atgcgacaag gaggaaaagg ccgaaaagge 180
 caagattaaa aaggccattc agaagggcaa tatggaagtt gcgaggattc acgcccagaa 240
 cgcgattcgc cagaagaacc aggcagtga tttcttgagg atgagcgcgc ggggtggacgc 300
 ggtggccgcc agggteccaga cggccgtgac gatgggcaag gtgaccaagt cgatggccgc 360
 agtggttaag tcgatggacg cgacgttgaa gaccatgaac ctcgagaaga tctccgccct 420
 gatggacaag ttcgagcacc agttcgagac gctggacgtt cagacgcagc agatggagga 480
 cacgatgagc agcagcacga cgtcgaccac tccccagggc caggtggaca tgc 533

<210> 111
 <211> 150
 <212> DNA
 <213> Bovine

<400> 111
 cgccttgctg cttagattgt tatggaggtc tcatcgaatg ttacttagcc tccaacagta 60
 ttctgtgaagc aatggtaatg gctaacaatg tttacaaaac tctaggagca atgcacaga 120
 cccttaccct tttagccacc gtttgtcttg 150

<210> 112
 <211> 405
 <212> DNA
 <213> Bovine

<400> 112
 ctctgggtgga ggtccgtagc ggtcctgacg tgcaaatecg tcgtccgacc tgggtatagg 60
 ggcgaaagac taatcgaacc atctagtagc tggttcctc cgaagtttcc catggtgaag 120
 gtgacgttca actcggctct ggcccagaag gaggccaaga aggacgagtc caagagcggc 180
 gaggagggcg tcatcattcc tccggacgcc gttgccgtgg actgcaagga ccagatgaa 240
 gtggttccgg ttggccaaag aagagcttgg tgttggtgca tgtgctttgg actggcgttt 300
 atgctcgcag gtgtcattct ggggggagca tacctgtaca aatactttgc atttcaacca 360
 gatgacgtct actactgtgg aataaagtac atcaaagatg atgtc 405

<210> 113
 <211> 1193
 <212> DNA
 <213> Bovine

<400> 113
 gagcagaaca agctgctgga gaccaagtgg gcgctgctgc aggagcagaa gtctgccaaag 60
 agcaaccgcc tcccgggcat ctttgaggcc cagattgctg gcctgcggaa gcaactagag 120
 gccctgcagc tggatggggg tcgcctggag gtggagcttc ggaacatgca ggatgtcgtg 180
 gaagacttea agaataagta tgaagatgaa attaaccatc gcacagctgc tgagaatgag 240
 tttgtggtgt tgaagaagga tgtggatgtt gcctacatga acaaggtgga gttggaggcc 300
 aaggtggata ccctgaatga tgagatcaac ttcctcagga ccctctatga gcaggagctg 360
 aaagagctgc agtctgaggt ctacagacac tccgtggtec tgtccatgga caacaaccgc 420
 tccctggact tggacagcat cattgctgaa gtcaaggccc agtatgagga gatcgccaac 480
 cgcagccggg cggaggecga ggctgttac cagaccaagt ttgagaccct ccaggcccag 540
 gctgggaagc acggggacga cctccggaat acccggaatg agattgcgga catgaaccgg 600

gctgtccaga	ggctgcaggc	cgagatcgac	agcgtcaaga	accagcgctc	caagttggaa	660
gccgccattg	ccgatgctga	acagcgtggg	gaactggctg	tcaaggatgc	acgggccaag	720
caggaggatc	tggaggccgc	cctgcagaag	gccaagcagg	acatgaccgc	gcagctgcgg	780
gagtaccagg	agctcatgaa	cgtcaagctg	gccctggaca	tcgagatcgc	cacctaccgc	840
aagctgctgg	agggcgagga	gagccggttg	accggagatg	gagtgggagc	cgtgaacatc	900
tctgtggtca	gttccacggg	tggctctggt	agcctgctga	cctttggggg	gaccatgggc	960
aacaacgccc	tgagattctc	cagcgggtga	gggcctggga	ccctcaaggc	ctactccatg	1020
aggaccacat	ccgccacaag	caggagcccc	cgcaaataag	ccctgggtgt	ggggagatac	1080
ataccccctc	ctcccatagt	cacaaggaga	cccccaacc	tggtcccacc	ctcatcccaa	1140
gaactgcaag	acagtttgaa	aaaagatatc	agaatagctt	ccaataaagc	agc	1193

<210> 114

<211> 298

<212> DNA

<213> Bovine

<400> 114

acgagttcta	ggtgagcgcc	agaggaagga	agaagagatg	aagcagctat	ttgtgcagcg	60
cgtgaaggag	aaagaagcca	tcctgaaaga	agctgagaga	gagctccagg	ccaagtttga	120
acaccttaaa	agagtccacc	aagaggagaa	gctgaggctg	gaagagaaga	gaagacttct	180
ggaagaagaa	atcatggctt	tctccaagaa	gaaagctact	tctgagatat	accagaacca	240
gacctttatg	accccaggca	gcaacctgag	gaaggacaag	gaccgcaaga	actccaat	298

<210> 115

<211> 446

<212> DNA

<213> Bovine

<400> 115

attttgtttc	tccagaacat	gttaagcact	gcttctggct	tactcaggaa	ttccgctatc	60
tgtcacagac	tcatacaaac	cacgaagata	aattacaggt	gaagaatgtt	atctaccatg	120
cagtaaaaga	tgcggttgct	atgctgaaag	ccagtgaatc	cagttttggc	aaaccctgag	180
ggteccagag	gcaccttacc	cctgcacatt	ggaagtgaat	tactggcagc	tgttcaaact	240
cttcaggcag	gattcctgtg	gactttgaga	ctcatgttac	ctcatcttct	tttttaaact	300
gtaccacact	ggtaaggggg	tactctgtct	aatgtatatt	tctagtgttt	acagacacta	360
aatgtgtata	tgtagtaact	atttacagaa	catgcatcct	ttaaaactgt	gactttctac	420
ctagtgcaga	gcttctaccc	acctgt				446

<210> 116

<211> 332

<212> DNA

<213> Bovine

<400> 116

aaacatttgg	atgtggatct	ggaccgccag	tctttaagca	gcattgataa	aaatgcctct	60
gagaggggtc	agagccaact	ctctaaccgc	accgatgacg	gctggaaagc	cagaccatat	120
gcaaatacaga	aactgtttgc	cagcctcctc	atcaagtgtg	tggtccagtt	ggaactgata	180
cagaccatcg	acaacatcgt	gttctaacc	gcgacaagca	agagggagga	cgagagcac	240
atggetgcc	tgccccagcc	ggtaccacac	gcataatagg	tctccttggc	cgctggatct	300
ggaatctgaa	tggtgcttct	gcaaagacct	tt			332

<210> 117

<211> 575

<212> DNA

<213> Bovine

<400> 117

agagagtacc	acatcaccgt	cgacgagccc	agattgaagc	agecaccctc	tggtttcgac	60
agtgtcattg	ctcgtggcca	cacagagcct	gatccaaccc	gggacaccga	gctggagcta	120
gatggccagc	gagtagtggg	gccccagggc	cagcccgtgc	tctgcccaga	tttcagaagc	180
tgcaactttt	cccagagcga	atatctcatc	taccaggaga	gccagcgtg	cctgcgctac	240
ctgctagaga	ttcacctctg	agctgtccgc	ccaaccctcc	cgccccctgg	gcaggagctc	300
aaccatcatc	ctcaatccca	tatcaacttc	ctgccctcac	atctccctcc	tgtgttccag	360
ggattccctc	tccctctgat	ccttggttgg	tctggcatgg	ctgtggcctc	agtctcacct	420
cctaaggtga	tgggtgtgat	ggactgcaac	acgaatacag	cagcctattc	aaggtgtgtg	480
agttaggggg	gcacaaactg	agagtgcgtg	ggtcccacat	ccaccaggc	catccgctgt	540
ggcctaactg	tccatccaag	agaggtgaga	tgatg			575

<210> 118

<211> 417

<212> DNA

<213> Bovine

<400> 118

tgctaagtaa	gattttctcat	gcaaaacctg	caattgcaga	ttatgcattt	acaacaataa	60
agcctgaact	tggaaaaatt	atgtatagtg	atttcaaaca	gatatcagta	gctgatcttc	120
ctggtttaat	agaaggagca	catatgaaca	aaggaatggg	ccacaaattc	ctcaagcata	180
tagaaagaac	taaacaactg	ctttttgttg	ttgatatttc	tggatttcag	ctttcttccc	240
aaactcatta	cagaactgct	tttgaaacca	taatactgct	ttcaaaagag	ttagagttgt	300
acaaagagga	acttcacaca	aaacctgcac	tccttgccagt	aaataaaaatg	gacttgccag	360
atgcaagagg	taaattccat	gtactgatga	accaacttca	gaattctaaa	gaatttt	417

<210> 119

<211> 377

<212> DNA

<213> Bovine

<400> 119

gaaaccttgg	gatgatgaga	ccgatatggc	aaaactagag	gagtgcgtca	gaagcattca	60
agcagatggc	ttgggtctggg	gctcttctaa	actagttccg	gttgggtatg	gcattaaaaa	120
actacaaata	cagtgtgtag	ttgaagacga	caaagttggg	acagacatgc	tggaggagca	180
gatcactgct	ttcgatgagt	atgtacagtc	tatggatgga	agacttggcg	acaagtgctg	240
gttttttggc	tttctttgac	tcatactggg	caaggcgctc	ttctcttagc	ctcttggctt	300
cttcactttc	ctcctcatca	tcagatccaa	agagatcaat	gtcgcacatc	ctttactatc	360
tgtagctcca	ctttctg					377

<210> 120

<211> 377

<212> DNA

<213> Bovine

<400> 120

tgcccatcat	cctagtgggc	aacaaaagcg	acctggtgcg	ctctcgcgag	gtctccttgg	60
acgagggccg	ggcctgtgcc	gttgtctttg	actgcaagtt	catcgagacg	tgggctgcac	120
tgcaccacaa	cgtccaggca	ctgttcgagg	gtgtcgtgcg	tcagatacgc	ctgcgcaggg	180
acagcaaaga	ggccaacgcg	cgtcggcaag	cgggtaccgc	gcggcgagag	agcctgggca	240
agaaggcgaa	gcgcttctg	ggcgcacatg	tcgctcgaaa	cagccgcaag	atggccatgc	300
gtgccaaagtc	caagtcctgc	catgacctat	cggtgctcta	gaccctgggg	cacttgctgt	360
attgtgcaaa	cagatgg					377

<210> 121

<211> 363

<212> DNA

<213> Bovine

<400> 121
caaaaatgta gtaagcagca ttcagaaata cgtgaaaatt taataacagc tttgtctaca 60
tggcagatgt ttatagtga tatcaaaaga aataatacag catttgatat aattgcagat 120
aattgtgata tacattttta aatatcaaga gatcgctca gtgcttcttc ccttaccatg 180
gagagttttg cttttctttg ggctggagga agggcatctt acggtgtgtc aaaaggcaaa 240
gtctgttttg agatgaagggt tacagagaag atccccgtga ggcattttata tacgaaagat 300
attgatata tgaagttcgg attgggtggt cactaaccac aagtggaatg ttgcttggtg 360
aag 363

<210> 122
<211> 501
<212> DNA
<213> Bovine

<400> 122
cttattttgt gacggattat gatccaacca tgcaggattc ctacacaaag cagtgtgtga 60
tagatgaccg ggcagcccgg ctgcacattc tggatacagc gggacaagag gaatttggag 120
ctatgagaga acagtatatg agaactggcg aggggttctt tttggctctt tcagtcacag 180
acagaggcag ttttgaagaa atctataagt ttcaaagaca gattctcaga gttaaaggatc 240
gtgatgagtt tccaatgatt ttaattggtg ataaagcaga tctggatcat cagagacagg 300
taacacagga agaaggacag cagtttagcac ggcaacttaa ggtaacatac atggaggcgt 360
cagcaaagat tagaatgaat gtagatcaag ctttccatga acttgctcgg gttataagga 420
aatttcaaga gcaggaatgt cctccttcac cagaaccaac acggaaagga aaaagacaag 480
aacggctgca ttgtgtcatt t 501

<210> 123
<211> 414
<212> DNA
<213> Bovine

<400> 123
ggaagcgtga ggcaccctcg aattccggtt ggaggctcct ttgagctcgc ggagtagaca 60
tgagcaaagc acaccctccc gagttgaaga aatttatgga caagaagtta tcattgaaat 120
taaatgggtg cagacatgtc caaggaatat tgcggggatt tgatcccttt atgaatcttg 180
tgatagatga atgtgtggag atggcaacta gtgggcaaca gaacaatatt ggaatgggtg 240
taatacagag aatagatc atcatgttag aagccttgga acgagtatga acaatggctg 300
tgttcaccag agaaatcaac gcttccatgt gtgccctctc cacattttac taccagaaaa 360
attgggttgt gtacattttt ttactttttt gttaaataaa cttttgtaat agcc 414

<210> 124
<211> 1369
<212> DNA
<213> Bovine

<400> 124
gttaatgccc gtctcctcag aataagagac ttgatggcag cggccttttag cagcctgctt 60
tggatcaggg actggagtag acgtccctag cagaggggtc ttctgggcag cgggagacct 120
accgaaggcg gcagtgatgg cggeccggcg ggatggatgg cttggcccgg cgtttggget 180
gcgactgctg ctggcgaccg tgcttcaaac ggtctctgca ttgggagcag aattttcctc 240
agagtcttgc agagagttag gtttctccag caacttgctc tgcagctcct gtgatttgct 300
tggacagttc aaccttctgc agctggatcc tgactgtaga ggggtgctgc aggaagaagc 360
acaatttgaa actaaaaagc tgtatgcagg agctattctt gaagtctgtg gatgaaaatt 420
ggggagggtc cctcaagtcc aagctttcgt caggagtgat aaaccaagc tattcaaagg 480
actacaaatc aagtatgttc gcggttcaga cctgtgtgta aagcttttgg acgacagtgg 540
gaacattgct gaagaactaa gcctcctcaa atggaacaca gacagtgtag aagaattcct 600
gagtgaagag ttggaacgca tataaatctt aaattttgtc ctatctttct gttaccttgt 660

tcaatgaaac	actatagcac	ctagaaaata	athtagtttt	gctttcttcc	attgatcagt	720
cttttactgt	gaggcattaa	acatctaatt	aaaagttcaa	gcagcagcgc	agcccatgat	780
aggtaagaag	ttaacaaaac	ccttttttat	aagtttccat	ccatcatttg	ttgataccac	840
tagtaacaga	atgccttcta	atagacttgt	ggttaattat	gcaaatagata	gtttgtgata	900
attggtcagt	tttatgaaca	acagattttt	aaattaagga	ggttaataag	ggagatgatt	960
attgtgcctc	gtgtgctgtg	tgctctttga	aagtaacaac	aacaaacttg	aaagcaagta	1020
agacataccg	agcctcaaga	gattgcctgt	tccccagatc	ctctcatatt	tttgtacacc	1080
cagccttcct	tttaatataga	atgtatagtt	tataatgaat	gcactgcata	aagactttat	1140
ggctgcatta	ttgtaaaaaca	gattcaagat	ctacagtaag	agtgaatat	tcacacaaag	1200
atgtgcatta	atgaagacta	cacagaaaac	cttcttgagg	atttgtgtgg	acctgatact	1260
tagcaaattt	ttgtgcttta	cattcttatg	gaaaagtcaa	tttaaaaatg	atcatttgta	1320
agaccaaatt	ataaataaaa	agtttcaaaa	atcaaaaaaa	aaaaaaaaa		1369

<210> 125
 <211> 327
 <212> DNA
 <213> Bovine

<400> 125						
caagactgac	atgttccaga	ccgttgacct	ctttgaaggc	aaagacctgg	ctgcggtgca	60
aaggaccttg	atggccctgg	gcagcttggc	agtgaccaag	aatgatggac	actaccgtgg	120
agatcccaac	tggtttatga	agaaagccca	ggagcataag	aggggaattca	cagagagcca	180
getgcaggag	ggcaagcatg	tcacggcct	acagatgggc	agcaacagag	gggctcgcga	240
ggctggcatg	acgggctatg	ggcgcccccg	gcagatcatc	agttaagagg	gtgagggccg	300
gcgcccagcc	ccacctttgc	cagctcgc				327

<210> 126
 <211> 740
 <212> DNA
 <213> Bovine

<400> 126						
gagcatatgc	ttgtctcaaa	gattaagcca	tgcatgtcta	agtacgcacg	gccggtacag	60
tgaaaccgcg	aatggctcat	taaateagtt	atggttcctt	tggtcgctcg	ctcctctcct	120
acttgataa	ctgtggtaat	tctagagcta	atacatgccg	acggggcgctg	accccttctg	180
cgggggggat	gcgtgcattt	atcagatcaa	aaccaaccgc	gtcagcctcc	tcccggcccc	240
ggccgggggg	cgggcgcgcg	cggctttggg	gactctagat	aacctcgggc	cgatcgcacg	300
ccccccgtgg	cggcgacgac	ccattcgaac	gtccgcctta	tcaactttcg	atggtagtcg	360
ctgtgcctac	catggtcacc	cgggggccagg	acgtgggacg	ttaccagggtg	tcctggagcc	420
tagatcacaa	gagcgcccat	gcgggcacct	atgaggtecg	gttctttgat	gaggagtcct	480
atagcctctt	gaggaaggct	cagagaaaca	atgaggacgt	ttctgtcatc	ccacctctat	540
tcacagtcag	cgtagaccat	cgggggtacct	ggaacggggc	ctgggtctcc	actgaagtcc	600
tggccgcagc	catcggacta	gtgatctact	accttgccct	cagcgccaag	agccacatcc	660
aggcctgagg	gtggtgcccc	ccccaccct	tgcttctttg	aataaagagc	tattggctat	720
cctgaaaaaa	aaaaaaaaaa					740

<210> 127
 <211> 315
 <212> DNA
 <213> Bovine

<400> 127						
agctttcgtg	atatttactt	tgacaccctt	aatgaagatc	ttttccagaa	aatacttgta	60
cccattcagc	aagtgttgaa	agaaggccac	ctggaaaaga	ctgagattga	tgagggtggc	120
ttggttgggg	gctcaactcg	tattcctcga	atccgccaaag	tcacccaaga	gttctttgga	180
aaggacccca	acacgtctgt	agaccctgac	ctggccgtgg	tgacaggagt	ggctatccag	240
gcagggtattg	atggaggctc	ttggcctctc	caagtcagtg	ctttagaaat	tccaataag	300

catttacaga agacc

315

<210> 128

<211> 390

<212> DNA

<213> Bovine

<400> 128

tggcacctgg	gacagcttcc	tggagaagtt	catggccggg	gaagtgtgct	acgggtcctg	60
gtaccagcac	gtgcatgagt	ggtgggagct	gagtcacacc	cacctgttc	tctacctctt	120
ctacgaggac	ataatggagg	accccaaaag	ggagattcag	aagatcctgg	agtttatagg	180
gcgctccctg	cctgaggaga	ctgtggatca	cattgtccag	cgaccatacc	cactgcagtc	240
atggaccaca	agcatctctt	ccttcattgag	gaaaggcatc	actgggtgatt	ggaaatccac	300
cttcactgtg	gccagaatg	agctctttga	agcccactat	gctaagaaga	tgcgggctgc	360
aagcttccgc	tttcgctgga	agctgtgagt				390

<210> 129

<211> 228

<212> DNA

<213> Bovine

<400> 129

caaaaaaagg	catctgcttc	tgcaggaaga	ataacagttc	cacggttaag	tgttggttca	60
gttactagca	gaccaagtac	tcccacgctt	ggcacaecaa	ccccaccagc	catgtccgtt	120
tcaactaaag	tagggactcc	agtgtccctc	acagggcaaa	ggttcacagt	acagatgccc	180
acttcacagt	ccccagctgt	aaaagcttca	attcctgcaa	catcagca		228

<210> 130

<211> 580

<212> DNA

<213> Bovine

<400> 130

gcagccacgc	tgaaccggct	cagggctttt	cgccacgccc	tgtcctctga	tcttcctctg	60
ctgggtcagt	tatggcggcc	gtgaagacc	tgaaccccaa	ggccgaggtg	gcccagagccc	120
aggcggcggt	ggcgggtcaac	atcagcgcg	cccgggggct	gcaggacgtg	ctgaggacca	180
acttggggcc	taagggcacc	atgaagatgc	ttgtttctgg	tgttgagagc	atcaaaactca	240
ctaaagatgg	aatgtgtgctg	cttcattgaaa	tgcaaattca	gcaccaaca	gcctccttaa	300
tagccaaagt	agcaacagcc	caggatgaca	taactggtga	tggcaccact	tccaatgtcc	360
tcatcatcgg	agagctgctg	aagcaggcgg	atctctacat	ttctgagggg	cttcattccca	420
gaataattac	agaaggattt	gaagctgcaa	aggaaaaggc	acttcagttc	ttggaacaag	480
tcaaagtaag	caaagagatg	gacagggaaa	catttataga	cgtggccaga	acatctctac	540
gtactaaagt	tcatgctgaa	cttgacagatg	tcttaacaga			580

<210> 131

<211> 679

<212> DNA

<213> Bovine

<400> 131

ggttgtctcc	aattttctct	cgccccctct	ccccgtccca	gccaagatgt	ctgacatgga	60
ggatgatttc	atgtgcatg	atgaggagga	ctacgacctg	gaatactctg	aagatagtaa	120
ctctgagcca	aatgtggatt	tggaaaatca	gtactataat	tccaaagcat	taaaagaaga	180
tgacccaaaa	gcagcattaa	gcagtttcca	aaagggtttg	gaacttgaag	gtgaaaaagg	240
agaatgggga	tttaagcac	tgaaacaaat	gattaagatt	aacttcaagt	tgacaaactt	300
tccagaaatg	atgaacagat	ataaacaact	attgacctat	attcggagtg	ctgteacaag	360
aaattattct	gaaaaatcca	ttaattctat	tcttgattat	atctctactt	ctaagcagaa	420

ttctgatttt	ttatgtcaga	tggttttact	gcaggaattc	tatgaaacaa	cactggaagc	480
tttgaaagat	gctaagaatg	acacactgtg	gtttaagaca	aacacaaagc	tggggaaatt	540
atatttagaa	cgagaggaat	atggaaaact	tcaaaaaatt	ttacgccagt	tacatcagtc	600
ctgccagact	gatgatggag	aagatgacct	gaaaaaggca	cacagttatt	agaaatatat	660
gctttggaaa	ttcaaagt					679

<210> 132
 <211> 226
 <212> PRT
 <213> Bovine

<400> 132

Cys	Thr	Cys	Leu	Asp	Gly	Ser	Val	Gly	Cys	Val	Pro	Leu	Cys	Ser	Val
1			5					10					15		
Asp	Val	Arg	Leu	Pro	Ser	Pro	Asp	Cys	Pro	Phe	Pro	Arg	Arg	Val	Lys
			20					25					30		
Leu	Pro	Gly	Lys	Cys	Cys	Glu	Glu	Trp	Val	Cys	Asp	Glu	Pro	Lys	Glu
		35					40					45			
His	Thr	Val	Val	Gly	Pro	Ala	Leu	Ala	Ala	Tyr	Arg	Pro	Glu	Asp	Thr
	50					55					60				
Phe	Gly	Pro	Asp	Pro	Thr	Met	Ile	Arg	Ala	Asn	Cys	Leu	Val	Gln	Thr
65					70				75					80	
Thr	Glu	Trp	Ser	Ala	Cys	Ser	Lys	Thr	Cys	Gly	Met	Gly	Ile	Ser	Thr
			85						90				95		
Arg	Val	Thr	Asn	Asp	Asn	Ala	Phe	Cys	Arg	Leu	Glu	Lys	Gln	Ser	Arg
			100					105					110		
Leu	Cys	Met	Val	Arg	Pro	Cys	Glu	Ala	Asp	Leu	Glu	Glu	Asn	Ile	Lys
		115					120					125			
Lys	Gly	Lys	Lys	Cys	Ile	Arg	Thr	Pro	Lys	Ile	Ser	Lys	Pro	Ile	Lys
	130					135					140				
Phe	Glu	Leu	Ser	Gly	Cys	Thr	Ser	Met	Lys	Thr	Tyr	Arg	Ala	Lys	Phe
145					150					155				160	
Cys	Gly	Val	Cys	Thr	Asp	Gly	Arg	Cys	Cys	Thr	Pro	His	Arg	Thr	Thr
			165					170					175		
Thr	Leu	Pro	Val	Glu	Phe	Lys	Cys	Pro	Asp	Gly	Glu	Val	Met	Lys	Lys
		180						185					190		
Ser	Met	Met	Phe	Ile	Lys	Thr	Cys	Ala	Cys	His	Tyr	Asn	Cys	Pro	Gly
	195					200						205			
Asp	Asn	Asp	Ile	Phe	Glu	Ser	Leu	Tyr	Tyr	Arg	Lys	Met	Tyr	Gly	Asp
	210					215					220				
Met	Ala														
225															

<210> 133
 <211> 103
 <212> PRT
 <213> Bovine

<400> 133

Met	Ser	Tyr	Gly	Arg	Pro	Pro	Pro	Asp	Val	Glu	Gly	Met	Thr	Ser	Leu
1				5					10					15	
Lys	Val	Asp	Asn	Leu	Thr	Tyr	Arg	Thr	Ser	Pro	Asp	Thr	Leu	Arg	Arg
			20					25					30		
Val	Phe	Glu	Lys	Tyr	Gly	Arg	Val	Gly	Asp	Val	Tyr	Ile	Pro	Arg	Asp
	35					40						45			
Arg	Tyr	Thr	Lys	Glu	Ser	Arg	Gly	Phe	Ala	Phe	Val	Arg	Phe	His	Asp
	50					55					60				

Lys Arg Asp Ala Glu Asp Ala Met Asp Ala Met Asp Gly Ala Val Leu
65 70 75 80
Asp Gly Arg Glu Leu Arg Val Gln Met Ala Arg Tyr Gly Arg Pro Arg
85 90 95
Ile Arg Thr Ile Ala Ala Gly
100

<210> 134
<211> 84
<212> PRT
<213> Bovine

<400> 134
Met Pro Tyr Leu Leu Ile Ser Thr Gln Ile Arg Met Glu Val Gly Pro
1 5 10 15
Thr Val Val Gly Asp Glu His Ser Asp Pro Glu Leu Met Gln His Leu
20 25 30
Gly Ala Ser Lys Arg Ser Val Leu Gly Asn Asn Phe Ser Glu Tyr Tyr
35 40 45
Val Asn Asp Pro Pro Arg Ile Val Leu Asp Lys Leu Glu Arg Arg Gly
50 55 60
Phe Arg Val Leu Ser Met Thr Gly Val Gly Gln Thr Leu Val Trp Cys
65 70 75 80
Leu His Lys Glu

<210> 135
<211> 189
<212> PRT
<213> Bovine

<400> 135
Met Leu Asp Ser Val Thr His Ser Thr Phe Leu Pro Asn Thr Ser Phe
1 5 10 15
Cys Asp Pro Leu Met Ser Trp Thr Asp Leu Phe Ser Asn Glu Glu Tyr
20 25 30
Tyr Pro Ala Phe Glu His Gln Thr Ala Cys Asp Ser Tyr Trp Thr Ser
35 40 45
Val His Pro Glu Tyr Trp Thr Lys Arg His Val Trp Glu Trp Leu Gln
50 55 60
Phe Cys Cys Asp Gln Tyr Lys Leu Asp Ala Asn Cys Ile Ser Phe Cys
65 70 75 80
His Phe Asn Ile Ser Gly Leu Gln Leu Cys Gly Met Thr Gln Glu Glu
85 90 95
Phe Met Glu Ala Ala Gly Val Cys Gly Glu Tyr Leu Tyr Phe Ile Leu
100 105 110
Gln Ser Ile Arg Ser Gln Gly Tyr Ser Phe Phe Asn Asp Pro Asp Glu
115 120 125
Thr Lys Ala Thr Leu Lys Asp Tyr Ala Asp Ser Ser Cys Leu Lys Thr
130 135 140
Ser Gly Ile Lys Ser Gln Asp Cys His Ser His Ser Arg Thr Ser Leu
145 150 155 160
Gln Ser Ser His Leu Trp Glu Phe Val Arg Asp Leu Leu Leu Ser Pro
165 170 175
Glu Glu Asn Cys Gly Ile Leu Glu Trp Glu Asp Lys Glu
180 185

<210> 136
 <211> 85
 <212> PRT
 <213> Bovine

<400> 136
 Ala Asp Ser Ser Cys Leu Lys Thr Ser Gly Ile Lys Ser Gln Asp Cys
 1 5 10 15
 His Ser His Ser Arg Thr Ser Leu Gln Ser Ser His Leu Trp Glu Phe
 20 25 30
 Val Arg Asp Leu Leu Leu Ser Pro Glu Glu Asn Cys Gly Ile Leu Glu
 35 40 45
 Trp Glu Asp Arg Glu Gln Gly Ile Phe Arg Val Val Lys Ser Glu Ala
 50 55 60
 Leu Ala Lys Met Trp Gly Gln Arg Lys Lys Asn Asp Arg Met Thr Tyr
 65 70 75 80
 Glu Lys Leu Ser Arg
 85

<210> 137
 <211> 101
 <212> PRT
 <213> Bovine

<400> 137
 Leu Ala Thr Leu Ala Gln Arg Val Lys Glu Val Leu Pro His Val Pro
 1 5 10 15
 Leu Gly Val Ile Gln Arg Asp Leu Ala Arg Thr Gly Cys Val Asp Leu
 20 25 30
 Thr Ile Thr Asn Leu Leu Glu Gly Ala Val Ala Phe Met Pro Glu Asp
 35 40 45
 Ile Thr Glu Gly Thr Gln Ser Leu Ala Thr Ala Ser Thr Pro Lys Phe
 50 55 60
 Pro Ser Ser Gly Pro Ala Thr Pro Gln Pro Thr Ala Leu Thr Phe Ala
 65 70 75 80
 Lys Ser Ser Trp Ala Arg Gln Glu Ser Leu Gln Glu Arg Lys Gln Ala
 85 90 95
 Leu Tyr Glu Cys Ala
 100

<210> 138
 <211> 73
 <212> PRT
 <213> Bovine

<400> 138
 Ser Phe Pro Gln Arg Met Ser Ser Phe Gln Leu Asn Leu Asn Pro Leu
 1 5 10 15
 Lys Glu Pro Leu Gly Phe Ile Lys Val Leu Glu Trp Ile Ala Ser Ile
 20 25 30
 Phe Ala Phe Ala Thr Cys Gly Gly Phe Lys Gly Lys Thr Glu Ile Gln
 35 40 45
 Val Ser Cys Thr Thr Gly Pro Glu Asn Lys Thr Ile Thr Ala Ala Phe
 50 55 60
 Gly Tyr Pro Phe Arg Leu Asn Glu Ala
 65 70

<210> 139
 <211> 124
 <212> PRT
 <213> Bovine

<400> 139
 Met Ala Asp Asp Leu Lys Arg Phe Leu Tyr Lys Lys Leu Pro Ser Val
 1 5 10 15
 Glu Gly Leu His Ala Ile Val Val Ser Asp Arg Asp Gly Val Pro Val
 20 25 30
 Ile Lys Val Ala Asn Asp Asn Ala Pro Glu His Ala Leu Arg Pro Gly
 35 40 45
 Phe Leu Ser Thr Phe Ala Leu Ala Thr Asp Gln Gly Ser Lys Leu Gly
 50 55 60
 Leu Ser Lys Asn Lys Ser Ile Ile Cys Tyr Tyr Asn Thr Tyr Gln Val
 65 70 75 80
 Val Gln Phe Asn Arg Leu Pro Leu Val Val Ser Phe Ile Ala Ser Ser
 85 90 95
 Asn Ala Asn Thr Gly Leu Ile Val Ser Leu Glu Lys Glu Leu Ala Pro
 100 105 110
 Leu Phe Glu Glu Leu Arg Gln Val Val Glu Val Ser
 115 120

<210> 140
 <211> 88
 <212> PRT
 <213> Bovine

<400> 140
 Gln Pro Ala Lys Leu Ala Glu Ala Phe Lys Tyr Phe Val Gln Gly Met
 1 5 10 15
 Gly Tyr Met Pro Ser Ala Ser Met Thr Arg Leu Met Arg Ser Arg Thr
 20 25 30
 Ala Ser Gly Ser Ser Val Thr Ser Leu Glu Gly Ala Arg Ser Arg Ser
 35 40 45
 His Thr Ser Glu Gly Thr Arg Ser Arg Ser His Thr Ser Glu Gly Thr
 50 55 60
 Arg Leu Asp Ile Ile Pro Asn Ser Gly Gly Pro Gly Ser Ser Ala Gly
 65 70 75 80
 Pro Asn Ser Thr Glu Val Ser Cys
 85

<210> 141
 <211> 86
 <212> PRT
 <213> Bovine

<400> 141
 Met Val Tyr Ile Ser Asn Gly Gln Val Leu Asp Ser Arg Ser Gln Ser
 1 5 10 15
 Pro Trp Arg Leu Ser Phe Ile Thr Asp Phe Phe Trp Gly Ile Ala Glu
 20 25 30
 Phe Val Val Leu Phe Phe Arg Thr Leu Leu Gln Gln Asp Val Lys Lys
 35 40 45
 Arg Arg Gly Tyr Gly Ser Ser Ser Asp Ser Arg Tyr Asp Asp Gly Arg
 50 55 60
 Gly Pro Pro Gly Asn Pro Pro Arg Arg Arg Met Gly Arg Ile Asn His

65 70
Leu Gln Gly Pro Asn Pro
85

75

80

<210> 142
<211> 69
<212> PRT
<213> Bovine

<400> 142
Met Phe Gly Tyr Ala Val Arg Arg Ala Leu Arg Lys Ser Lys Thr Leu
1 5 10 15
Arg Tyr Gly Val Pro Met Leu Leu Leu Ile Val Gly Gly Ser Phe Gly
20 25 30
Leu Arg Glu Phe Ser Gln Ile Arg Tyr Asp Ala Val Lys Ile Lys Ile
35 40 45
Asp Pro Glu Leu Glu Lys Lys Leu Lys Met Asn Lys Val Ser Leu Glu
50 55 60
Ser Glu Tyr Glu Lys
65

<210> 143
<211> 257
<212> PRT
<213> Bovine

<400> 143
Met Thr Gln Ile Met Phe Glu Thr Phe Asn Thr Pro Ala Met Tyr Val
1 5 10 15
Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala Ser Gly Arg Thr Thr Gly
20 25 30
Ile Val Met Asp Ser Gly Asp Gly Val Thr His Thr Val Pro Ile Tyr
35 40 45
Glu Gly Tyr Ala Leu Pro His Ala Ile Leu Arg Leu Asp Leu Ala Gly
50 55 60
Arg Asp Leu Thr Asp Tyr Leu Met Lys Ile Leu Thr Glu Arg Gly Tyr
65 70 75 80
Ser Phe Thr Thr Thr Ala Glu Arg Glu Ile Val Arg Asp Ile Lys Glu
85 90 95
Lys Pro Cys Tyr Val Ala Leu Asp Phe Glu Gln Glu Met Ala Thr Ala
100 105 110
Ala Ser Ser Ser Ser Leu Glu Lys Ser Tyr Glu Leu Pro Asp Gly Gln
115 120 125
Val Ile Thr Ile Gly Asn Glu Arg Phe Arg Cys Pro Glu Ala Leu Phe
130 135 140
Gln Pro Ser Phe Leu Gly Met Glu Ser Cys Gly Ile His Glu Thr Thr
145 150 155 160
Phe Asn Ser Ile Met Lys Cys Asp Val Asp Ile Arg Lys Asp Leu Tyr
165 170 175
Ala Asn Thr Val Leu Ser Gly Gly Thr Thr Met Tyr Pro Gly Ile Ala
180 185 190
Asp Arg Met Gln Lys Glu Ile Thr Ala Leu Ala Pro Ser Thr Met Lys
195 200 205
Ile Lys Ile Ile Ala Pro Pro Glu Arg Lys Tyr Ser Val Trp Ile Gly
210 215 220
Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe Gln Gln Met Trp Ile Ser
225 230 235 240

Lys Gln Glu Tyr Asp Glu Ser Gly Pro Ser Ile Val His Arg Lys Cys
 245 250 255
 Phe

<210> 144
 <211> 212
 <212> PRT
 <213> Bovine

<400> 144
 Lys Thr Val Ala Val Pro Cys Ile Ile Gln Asp Ser Ser Ser Cys Cys
 1 5 10 15
 Val Pro Asn Cys Glu Pro Ser Leu Ser Val Gln Pro Pro Ala Leu Glu
 20 25 30
 Asp Leu Leu Leu Gly Ser Asn Ala Ser Leu Thr Cys Thr Leu Ser Gly
 35 40 45
 Leu Lys Ser Ala Glu Gly Ala Ser Phe Thr Trp Asn Pro Thr Gly Gly
 50 55 60
 Lys Thr Ala Val Gln Gly Ser Pro Lys Arg Asp Ser Cys Gly Cys Tyr
 65 70 75 80
 Ser Val Ser Ser Val Leu Pro Gly Cys Ala Asp Pro Trp Asn Ser Gly
 85 90 95
 Gln Thr Phe Ser Cys Ser Val Thr His Pro Glu Ser Lys Ser Ser Leu
 100 105 110
 Thr Ala Thr Ile Lys Lys Asp Leu Gly Asn Thr Phe Arg Pro Gln Val
 115 120 125
 His Leu Leu Pro Pro Pro Ser Glu Glu Leu Ala Leu Asn Glu Leu Val
 130 135 140
 Thr Leu Thr Cys Leu Val Arg Gly Phe Asn Pro Lys Glu Val Leu Val
 145 150 155 160
 Arg Trp Leu Gln Gly Asn Gln Glu Leu Pro Arg Glu Lys Tyr Leu Thr
 165 170 175
 Trp Ala Pro Cys Pro Ser Trp Pro Glu Arg Thr Thr Phe Ala Val Thr
 180 185 190
 Asn Val Leu Arg Val Asp Ala Glu Val Trp Lys Gln Gly Asp Thr Phe
 195 200 205
 Ser Ala Trp Trp
 210

<210> 145
 <211> 148
 <212> PRT
 <213> Bovine

<400> 145
 Met Val Met Val Leu Ser Pro Leu Phe Leu Val Phe Ile Leu Gly Leu
 1 5 10 15
 Gly Leu Thr Pro Val Ala Pro Ala Gln Asp Asp Tyr Arg Tyr Ile His
 20 25 30
 Phe Leu Thr Gln His Tyr Asp Ala Lys Pro Lys Gly Arg Asn Asp Glu
 35 40 45
 Tyr Cys Phe Asn Met Met Lys Asn Arg Arg Leu Thr Arg Pro Cys Lys
 50 55 60
 Asp Arg Asn Thr Phe Ile His Gly Asn Lys Asn Asp Ile Lys Ala Ile
 65 70 75 80
 Cys Glu Asp Arg Asn Gly Gln Pro Tyr Arg Gly Asp Leu Arg Ile Ser

				85					90					95		
Lys	Ser	Glu	Phe	Gln	Ile	Thr	Ile	Cys	Lys	His	Lys	Gly	Gly	Ser	Ser	
			100					105					110			
Arg	Pro	Pro	Cys	Arg	Tyr	Gly	Ala	Thr	Glu	Asp	Ser	Arg	Val	Ile	Val	
		115					120						125			
Val	Gly	Cys	Glu	Asn	Gly	Leu	Pro	Val	His	Phe	Asp	Glu	Ser	Phe	Ile	
	130					135					140					
Thr	Pro	Arg	His													
145																

<210> 146
 <211> 140
 <212> PRT
 <213> Bovine

<400> 146																
Arg	Phe	Met	Leu	Leu	Phe	Ser	Arg	Gln	Gly	Lys	Leu	Arg	Leu	Gln	Lys	
1				5					10					15		
Trp	Tyr	Leu	Ala	Thr	Ser	Asp	Lys	Glu	Arg	Lys	Lys	Met	Val	Arg	Glu	
			20					25					30			
Leu	Met	Gln	Val	Val	Leu	Ala	Arg	Lys	Pro	Lys	Met	Cys	Ser	Phe	Leu	
		35					40					45				
Glu	Trp	Arg	Asp	Leu	Lys	Val	Val	Tyr	Lys	Arg	Tyr	Ala	Ser	Leu	Tyr	
	50					55					60					
Phe	Cys	Cys	Ala	Ile	Glu	Gly	Gln	Asp	Asn	Glu	Leu	Ile	Thr	Leu	Glu	
65					70					75					80	
Leu	Ile	His	Arg	Tyr	Val	Glu	Leu	Leu	Asp	Lys	Tyr	Phe	Gly	Ser	Val	
				85					90					95		
Cys	Glu	Leu	Asp	Ile	Ile	Phe	Asn	Phe	Glu	Lys	Ala	Tyr	Phe	Ile	Leu	
			100					105					110			
Asp	Glu	Phe	Leu	Met	Gly	Gly	Asp	Val	Gln	Asp	Thr	Ser	Lys	Lys	Ser	
		115					120					125				
Val	Leu	Lys	Ala	Ile	Glu	Gln	Ala	Asp	Leu	Leu	Gln					
	130					135					140					

<210> 147
 <211> 103
 <212> PRT
 <213> Bovine

<400> 147																
Val	Gln	Val	Ile	Cys	Met	Lys	Gly	Lys	Ala	Lys	Tyr	Lys	Ala	Ser	Glu	
1				5					10					15		
Asn	Ala	Ile	Val	Trp	Lys	Ile	Lys	Arg	Met	Ala	Gly	Met	Lys	Glu	Ser	
			20					25					30			
Gln	Ile	Ser	Ala	Glu	Ile	Glu	Leu	Leu	Pro	Thr	Asn	Asp	Lys	Lys	Lys	
		35					40					45				
Trp	Ala	Arg	Pro	Pro	Ile	Ser	Met	Asn	Phe	Glu	Val	Pro	Phe	Ala	Pro	
	50					55					60					
Ser	Gly	Leu	Lys	Val	Arg	Tyr	Leu	Lys	Val	Phe	Glu	Pro	Lys	Leu	Asn	
65					70					75					80	
Tyr	Ser	Asp	His	Asp	Val	Ile	Lys	Trp	Val	Arg	Tyr	Ile	Gly	Arg	Ser	
			85					90						95		
Gly	Ile	Tyr	Glu	Thr	Arg	Cys										
			100													

<210> 148

<211> 147
 <212> PRT
 <213> Bovine

<400> 148

Pro	Ala	Ala	Ala	Met	Ile	Leu	Leu	Glu	Val	Asn	Asn	Arg	Ile	Ile	Glu
1				5				10					15		
Glu	Thr	Leu	Ala	Leu	Lys	Phe	Glu	Asn	Ala	Ala	Ala	Gly	Asn	Lys	Pro
		20					25					30			
Glu	Ala	Val	Glu	Val	Thr	Phe	Ala	Asp	Phe	Asp	Gly	Val	Leu	Phe	Ser
	35					40					45				
His	Arg	Glu	Pro	Pro	Leu	Glu	Leu	Lys	Asp	Thr	Asp	Ala	Ala	Val	Gly
	50				55					60					
Asp	Asn	Ile	Gly	Tyr	Ile	Thr	Phe	Val	Leu	Phe	Pro	Arg	His	Thr	Asn
65			70					75					80		
Ala	Ser	Ala	Arg	Asp	Asn	Thr	Ile	Asn	Leu	Ile	His	Thr	Phe	Arg	Asp
		85						90					95		
Tyr	Leu	His	Tyr	His	Ile	Lys	Cys	Ser	Lys	Ala	Tyr	Ile	His	Thr	Arg
	100					105						110			
Met	Arg	Ala	Lys	Thr	Ser	Asp	Phe	Leu	Lys	Val	Leu	Asn	Arg	Ala	Arg
	115					120						125			
Pro	Asp	Ala	Glu	Lys	Lys	Glu	Met	Lys	Thr	Ile	Thr	Gly	Lys	Thr	Phe
	130				135						140				
Ser	Ser	Arg													
145															

<210> 149
 <211> 77
 <212> PRT
 <213> Bovine

<400> 149

Phe	Met	Thr	His	Pro	Glu	Phe	Arg	Ile	Glu	Asp	Ser	Glu	Pro	His	Ile
1			5					10				15			
Pro	Leu	Ile	Asp	Asp	Thr	Asp	Ala	Glu	Asp	Asp	Ala	Pro	Thr	Lys	Arg
		20					25					30			
Asn	Ser	Ser	Pro	Pro	Pro	Ser	Pro	Asn	Lys	Asn	Asn	Asn	Ala	Val	Asp
	35					40					45				
Ser	Gly	Ile	Tyr	Leu	Thr	Ile	Glu	Met	Asn	Lys	Ser	Ala	Thr	Ser	Ser
	50				55					60					
Ser	Pro	Gly	Ser	Pro	Leu	His	Ser	Leu	Glu	Thr	Ser	Leu			
65				70					75						

<210> 150
 <211> 148
 <212> PRT
 <213> Bovine

<220>

<221> VARIANT

<222> (1)...(148)

<223> Xaa = Any Amino Acid

<400> 150

Met	Asn	Glu	Asn	Leu	Phe	Thr	Ser	Phe	Ile	Thr	Pro	Val	Ile	Leu	Gly
1			5					10				15			
Leu	Pro	Leu	Val	Thr	Leu	Ile	Val	Leu	Phe	Pro	Ser	Leu	Leu	Phe	Pro

			20					25				30					
Thr	Ser	Asn	Arg	Leu	Val	Ser	Asn	Arg	Phe	Val	Thr	Leu	Gln	Gln	Xaa		
		35					40					45					
Ile	Leu	Gln	Leu	Val	Ser	Lys	Gln	Ile	Met	Ser	Ile	His	Asn	Ser	Lys		
	50					55					60						
Gly	Gln	Thr	Xaa	Thr	Leu	Ile	Leu	Ile	Ser	Leu	Ile	Leu	Phe	Ile	Gly		
65					70					75					80		
Ser	Thr	Asn	Leu	Leu	Gly	Leu	Leu	Pro	His	Ser	Phe	Thr	Pro	Thr	Thr		
			85						90						95		
Gln	Leu	Ser	Ile	Asn	Leu	Gly	Ile	Ala	Ile	Pro	Leu	Xaa	Ala	Gly	Ala		
		100						105					110				
Val	Ile	Thr	Gly	Phe	Arg	Asn	Lys	Thr	Lys	Ala	Ser	Leu	Ala	His	Phe		
		115					120					125					
Leu	Pro	Gln	Gly	Thr	Pro	Thr	Pro	Leu	Ile	Pro	Ile	Leu	Val	Ile	Ile		
	130					135					140						
Glu	Thr	Ile	Ser														
145																	

<210> 151
 <211> 71
 <212> PRT
 <213> Bovine

Met	Val	Pro	Pro	Val	Gln	Val	Ser	Pro	Leu	Ile	Lys	Leu	Gly	Arg	Tyr		
1				5					10				15				
Ser	Ala	Leu	Phe	Leu	Gly	Met	Ala	Tyr	Gly	Ala	Lys	Arg	Tyr	Asn	Tyr		
			20					25					30				
Leu	Lys	Pro	Arg	Ala	Glu	Glu	Glu	Arg	Arg	Leu	Ala	Ala	Glu	Glu	Lys		
		35					40					45					
Lys	Lys	Arg	Asp	Glu	Gln	Lys	Arg	Ile	Glu	Arg	Glu	Leu	Ala	Glu	Ala		
	50					55					60						
Gln	Glu	Asp	Thr	Ile	Leu	Lys											
65					70												

<210> 152
 <211> 173
 <212> PRT
 <213> Bovine

Arg	Gly	Ala	Ala	Glu	Glu	Gly	Pro	Gly	Asp	Gly	Gly	Glu	Ala	Met	Trp		
1				5					10				15				
Gln	Leu	Leu	Leu	Pro	Leu	Ala	Leu	Gly	Leu	Gly	Thr	Met	Gly	Leu	Gly		
			20					25					30				
Arg	Ala	Glu	Leu	Thr	Thr	Ala	Gln	His	Arg	Gly	Leu	Gln	Val	Ala	Leu		
		35					40					45					
Glu	Glu	Phe	His	Lys	His	Pro	Pro	Val	Leu	Trp	Ala	Phe	Gln	Val	Thr		
	50					55					60						
Ser	Val	Asp	Asn	Ala	Ala	Asp	Thr	Leu	Phe	Pro	Ala	Gly	Gln	Phe	Val		
65				70					75						80		
Arg	Leu	Glu	Phe	Lys	Leu	Gln	Gln	Thr	Ser	Cys	Arg	Lys	Lys	Asp	Trp		
			85						90					95			
Arg	Lys	Glu	Asp	Cys	Lys	Val	Lys	Pro	Asn	Gly	Arg	Lys	Arg	Lys	Cys		
		100						105					110				
Leu	Ala	Cys	Ile	Lys	Leu	Asp	Ser	Lys	Asp	Gln	Val	Leu	Gly	Arg	Met		
		115					120					125					

Val	His	Cys	Pro	Ile	Gln	Thr	Gln	Glu	Leu	Asp	Asp	Ala	Gln	Asp	Ala
130						135					140				
Gln	Cys	Ser	Arg	Val	Glu	Arg	Ala	Gly	Glu	Asp	Pro	His	Ser	Tyr	Tyr
145					150					155					160
Leu	Pro	Gly	Gln	Phe	Ala	Phe	Ile	Lys	Ala	Leu	Ser	Pro			
				165					170						

<210> 153
 <211> 124
 <212> PRT
 <213> Bovine

Cys	Arg	Pro	Ser	His	Pro	Val	Cys	Ser	Thr	Thr	Val	Ser	Cys	Val	Ser
1				5					10					15	
Ala	Glu	Gly	Ser	Ala	Gln	Arg	Gly	Pro	Gly	Pro	Trp	Pro	Pro	Cys	Pro
			20					25					30		
Ala	Ala	Cys	Cys	Gly	Glu	Trp	Trp	Arg	Ala	Thr	Ala	Leu	Ala	Leu	Leu
		35					40					45			
Ser	Ser	Leu	Asp	Ala	Leu	Gln	Val	Cys	Val	Cys	Thr	Cys	Gly	Arg	Ala
50						55					60				
Trp	Ala	Trp	Pro	Cys	Phe	Leu	Ala	Gly	Lys	His	Val	Gly	Pro	Gly	Val
65					70					75					80
Ala	Gly	Pro	Leu	Arg	Cys	Thr	Ser	Gly	Ala	Gly	Gly	Asp	Pro	Ser	Pro
				85					90					95	
Pro	Arg	Glu	Thr	Glu	Leu	Ser	Ser	Asn	Met	Met	Val	Leu	Asn	Asp	Ile
			100					105						110	
Leu	Thr	Ser	Phe	Asp	Glu	Asn	Cys	His	Phe	Ser	Met				
		115					120								

<210> 154
 <211> 100
 <212> PRT
 <213> Bovine

Glu	Glu	Trp	Ser	Cys	Cys	Ile	Arg	Asn	Leu	Leu	Leu	Gly	Gln	Glu	Lys
1				5					10					15	
Asp	Val	Glu	Val	Ser	Ile	Pro	Ala	Ser	Phe	Phe	Pro	Arg	Leu	Thr	Pro
			20					25					30		
Trp	Met	Val	Ala	Val	Ala	Val	Ile	Leu	Val	Val	Leu	Gly	Leu	Leu	Thr
		35					40					45			
Ile	Gly	Ser	Ile	Phe	Phe	Thr	Trp	Arg	Leu	Tyr	Lys	Glu	Arg	Ser	Arg
50						55					60				
Gln	Arg	Arg	Asn	Glu	Phe	Ser	Ser	Lys	Glu	Lys	Leu	Leu	Glu	Glu	Leu
65					70					75					80
Lys	Trp	Lys	Arg	Ala	Thr	Leu	His	Ala	Val	Asp	Val	Thr	Leu	Asp	Pro
				85				90						95	
Asp	Thr	Ala	His												
			100												

<210> 155
 <211> 110
 <212> PRT
 <213> Bovine

<400> 155

Gly	Arg	Pro	Ala	Leu	His	Leu	Val	Ala	Leu	Asn	Thr	Pro	Phe	Ser	Gly
1				5					10					15	
Asp	Ile	Arg	Ala	Asp	Phe	Gln	Cys	Phe	Gln	Gln	Ala	Arg	Ala	Ala	Gly
			20					25					30		
Leu	Leu	Ser	Thr	Tyr	Arg	Ala	Phe	Leu	Ser	Ser	His	Leu	Gln	Asp	Leu
		35					40					45			
Ser	Thr	Val	Val	Arg	Lys	Ala	Glu	Arg	Tyr	Ser	Leu	Pro	Ile	Val	Asn
	50					55					60				
Leu	Lys	Gly	Gln	Val	Leu	Phe	Asn	Asn	Trp	Asp	Ser	Ile	Phe	Ser	Gly
65					70					75					80
His	Gly	Gly	Gln	Phe	Asn	Thr	His	Ile	Pro	Ile	Tyr	Ser	Phe	Asp	Gly
				85					90					95	
Pro	Asp	Val	Met	Thr	Asp	Leu	Ser	Gly	Pro	Glu	Gly	Ile	Leu		
			100					105					110		

<210> 156
 <211> 217
 <212> PRT
 <213> Bovine

Met	Ser	Ser	Lys	Val	Ser	Arg	Asp	Thr	Leu	Tyr	Glu	Ala	Val	Arg	Glu
1				5					10					15	
Val	Leu	His	Gly	Asn	Gln	Arg	Lys	Arg	Arg	Lys	Phe	Leu	Glu	Thr	Val
			20					25					30		
Glu	Leu	Gln	Ile	Ser	Leu	Lys	Asn	Tyr	Asp	Pro	Gln	Lys	Asp	Lys	Arg
		35					40					45			
Phe	Ser	Gly	Thr	Val	Arg	Leu	Lys	Ser	Thr	Pro	Arg	Pro	Lys	Phe	Ser
	50					55				60					
Val	Cys	Val	Leu	Gly	Asp	Gln	Gln	His	Cys	Asp	Glu	Ala	Lys	Ala	Val
65					70				75						80
Asp	Ile	Pro	His	Met	Asp	Ile	Glu	Ala	Leu	Lys	Lys	Leu	Asn	Lys	Asn
				85				90					95		
Lys	Lys	Leu	Val	Lys	Lys	Leu	Ala	Lys	Lys	Tyr	Asp	Ala	Phe	Leu	Ala
			100					105					110		
Ser	Glu	Ser	Leu	Ile	Lys	Gln	Ile	Pro	Arg	Ile	Leu	Gly	Pro	Gly	Leu
		115				120						125			
Asn	Lys	Ala	Gly	Lys	Phe	Pro	Ser	Leu	Leu	Thr	His	Asn	Glu	Asn	Met
						135					140				
Val	Ala	Lys	Val	Asp	Glu	Val	Lys	Ser	Thr	Ile	Lys	Phe	Gln	Met	Lys
145					150					155					160
Lys	Val	Leu	Cys	Leu	Ala	Val	Ala	Val	Gly	His	Val	Lys	Met	Thr	Asp
				165					170					175	
Asp	Glu	Leu	Val	Tyr	Asn	Ile	His	Leu	Ala	Val	Asn	Phe	Leu	Val	Ser
			180					185					190		
Leu	Leu	Lys	Lys	Asn	Trp	Gln	Asn	Val	Arg	Ala	Leu	Tyr	Ile	Lys	Asn
		195				200						205			
Thr	Met	Gly	Lys	Pro	Gln	Arg	Leu	Tyr							
						215									

<210> 157
 <211> 142
 <212> PRT
 <213> Bovine

<400> 157
 Met Ala Ser Lys Arg Ala Leu Val Ile Leu Ala Lys Gly Ala Glu Glu

1				5				10				15			
Met	Glu	Thr	Val	Ile	Pro	Val	Asp	Val	Met	Arg	Arg	Ala	Gly	Ile	Lys
			20					25					30		
Val	Thr	Val	Ala	Gly	Leu	Ala	Gly	Lys	Asp	Pro	Val	Gln	Cys	Ser	Arg
		35					40					45			
Asp	Val	Val	Ile	Cys	Pro	Asp	Ala	Ser	Leu	Glu	Asp	Ala	Lys	Lys	Glu
	50					55					60				
Gly	Pro	Tyr	Asp	Val	Val	Val	Leu	Pro	Gly	Gly	Asn	Leu	Gly	Ala	Gln
65					70					75					80
Asn	Leu	Ser	Glu	Ser	Ala	Ala	Val	Lys	Glu	Ile	Leu	Lys	Glu	Gln	Glu
				85					90					95	
Lys	Arg	Lys	Gly	Leu	Ile	Ala	Ala	Ile	Cys	Ala	Gly	Pro	Thr	Ala	Leu
			100					105						110	
Leu	Ala	His	Glu	Ile	Gly	Phe	Gly	Ser	Lys	Val	Thr	Thr	His	Pro	Leu
		115					120					125			
Ala	Lys	Asp	Lys	Met	Met	Asn	Gly	Ser	His	Tyr	Ser	Tyr	Ser		
	130					135					140				

<210> 158
 <211> 65
 <212> PRT
 <213> Bovine

<400> 158															
Lys	Pro	Gln	Phe	Ile	Ser	Arg	Gly	Thr	Phe	Asn	Pro	Glu	Lys	Gly	Lys
1				5				10					15		
Gln	Lys	Leu	Lys	Asn	Val	Lys	Asn	Ser	Pro	Gln	Lys	Thr	Lys	Glu	Thr
		20						25					30		
Pro	Glu	Gly	Ile	Val	Val	Ser	Ser	Arg	Arg	Lys	Thr	Val	Asp	Pro	Asp
		35					40					45			
Cys	Ser	Ser	Ala	Gln	Gln	Leu	Ala	Leu	Phe	Gly	Asn	Asn	Glu	Phe	Met
	50					55					60				
Val															
65															

<210> 159
 <211> 88
 <212> PRT
 <213> Bovine

<400> 159															
Met	Pro	Ala	Ala	Thr	Val	Asp	His	Ser	Gln	Arg	Ile	Cys	Glu	Val	Trp
1				5				10					15		
Ala	Cys	Asn	Leu	Asp	Glu	Glu	Met	Lys	Lys	Ile	Arg	Gln	Val	Ile	Arg
		20						25					30		
Lys	Tyr	Asn	Tyr	Val	Ala	Met	Asp	Thr	Glu	Phe	Pro	Gly	Val	Val	Ala
		35					40					45			
Arg	Pro	Ile	Gly	Glu	Phe	Arg	Ser	Asn	Ala	Asp	Tyr	Gln	Tyr	Gln	Leu
	50					55					60				
Leu	Arg	Cys	Asn	Val	Asp	Leu	Leu	Lys	Ile	Ile	Gln	Leu	Gly	Leu	Thr
65				70					75						80
Phe	Met	Asn	Glu	Gln	Glu	Asn	Thr								
				85											

<210> 160
 <211> 176
 <212> PRT

<213> Bovine

<400> 160

Met	Asn	Trp	Leu	Val	Trp	Ala	Leu	Leu	Leu	Cys	Ser	Ser	Ala	Met	Ala
1				5					10					15	
His	Val	His	Arg	Asp	Pro	Thr	Leu	Asp	His	His	Trp	Asp	Leu	Trp	Lys
			20					25					30		
Lys	Thr	Tyr	Gly	Lys	Gln	Tyr	Lys	Glu	Lys	Asn	Glu	Glu	Val	Ala	Arg
		35					40					45			
Arg	Leu	Ile	Trp	Glu	Lys	Asn	Leu	Lys	Thr	Val	Thr	Leu	His	Asn	Leu
	50					55					60				
Glu	His	Ser	Met	Gly	Met	His	Ser	Tyr	Glu	Leu	Gly	Met	Asn	His	Leu
65					70					75					80
Gly	Asp	Met	Thr	Ser	Glu	Glu	Val	Ile	Ser	Leu	Met	Ser	Ser	Leu	Arg
			85					90						95	
Val	Pro	Ser	Gln	Trp	Pro	Arg	Asn	Val	Thr	Tyr	Lys	Ser	Asp	Pro	Asn
			100					105						110	
Gln	Lys	Leu	Pro	Asp	Ser	Met	Asp	Trp	Arg	Glu	Lys	Gly	Cys	Val	Thr
		115					120					125			
Glu	Val	Lys	Tyr	Gln	Gly	Ala	Cys	Gly	Ser	Cys	Trp	Ala	Phe	Ser	Ala
	130					135						140			
Val	Gly	Ala	Leu	Glu	Ala	Gln	Val	Lys	Leu	Lys	Thr	Gly	Lys	Leu	Val
145					150					155					160
Ser	Leu	Ser	Ala	Gln	Asn	Leu	Val	Asp	Cys	Ser	Thr	Ala	Lys	Tyr	Gly
				165					170						175

<210> 161

<211> 104

<212> PRT

<213> Bovine

<400> 161

Gly	His	Leu	Tyr	Thr	Val	Pro	Ile	Arg	Glu	Gln	Gly	Asn	Ile	Tyr	Lys
1				5					10					15	
Pro	Asn	Asn	Lys	Ala	Met	Ala	Glu	Glu	Met	Asn	Glu	Lys	Gln	Val	Tyr
			20					25					30		
Asp	Ala	His	Thr	Lys	Glu	Ile	Asp	Leu	Val	Asn	Arg	Asp	Pro	Lys	His
		35					40					45			
Leu	Asn	Asp	Asp	Val	Val	Lys	Ile	Asp	Phe	Glu	Asp	Val	Ile	Ala	Glu
	50					55					60				
Pro	Glu	Gly	Thr	His	Ser	Phe	Asp	Gly	Ile	Trp	Lys	Ala	Ser	Phe	Thr
65					70					75					80
Thr	Phe	Thr	Val	Thr	Lys	Tyr	Trp	Phe	Tyr	Arg	Leu	Leu	Ser	Ala	Ser
			85						90					95	
Leu	Ala	Ser	Gln	Trp	His	Ser	Ser								
			100												

<210> 162

<211> 244

<212> PRT

<213> Bovine

<400> 162

Met	Ala	Leu	Phe	Thr	Val	Val	Leu	Phe	Leu	Ala	Ala	Val	Trp	Leu	Pro
1				5					10					15	
Phe	Phe	Pro	Ala	Lys	Gly	Gln	Asp	Arg	Arg	Phe	Ala	Asp	Leu	Ser	Asn
			20					25					30		

Thr	Leu	Lys	Asn	Val	Gln	Thr	Glu	Ile	Val	Asn	Lys	His	Asn	Asp	Leu
	35						40					45			
Arg	Arg	Gly	Val	Ser	Pro	Pro	Pro	Ser	Asn	Met	Leu	Lys	Met	Gln	Trp
	50					55					60				
Asn	Thr	Thr	Ala	Ala	Ala	Asn	Ala	Gln	Asn	Trp	Ala	Asn	Lys	Cys	Leu
65					70					75					80
Phe	Lys	His	Ser	Lys	Lys	Glu	Asp	Arg	Arg	Val	Gly	Thr	Arg	Asn	Cys
				85					90					95	
Gly	Glu	Asn	Leu	Phe	Met	Ser	Ser	Tyr	Pro	Ser	Thr	Trp	Ser	Asn	Ala
			100					105					110		
Ile	Gln	Ser	Trp	Tyr	Asp	Glu	Val	His	Asp	Phe	Val	Phe	Glu	Val	Gly
	115						120					125			
Pro	Lys	Ser	Pro	Gln	Ala	Val	Ile	Gly	His	Phe	Thr	Gln	Ile	Val	Trp
	130					135					140				
Tyr	Ser	Ser	Phe	Leu	Ile	Gly	Cys	Gly	Val	Ala	Tyr	Cys	Pro	Lys	Gln
145					150					155					160
Ser	Leu	Lys	Tyr	Leu	Tyr	Val	Cys	Gln	Tyr	Cys	Pro	Ala	Gly	Asn	Ile
				165					170					175	
Val	Gly	Arg	Gln	His	Val	Pro	Tyr	Gln	Lys	Gly	Thr	Pro	Cys	Gly	Ser
			180					185					190		
Cys	Pro	Asn	His	Cys	Asp	Asn	Gly	Leu	Cys	Thr	Asn	Ser	Cys	Glu	Tyr
		195					200					205			
Glu	Asp	Thr	Tyr	Ser	Asn	Cys	Ala	Ser	Leu	Lys	Glu	Thr	Trp	Thr	Cys
	210					215					220				
Ala	Ser	Asp	Phe	Val	Lys	Thr	Asn	Cys	Lys	Ala	Ala	Cys	Asn	Cys	Gln
225					230					235					240
Gly	Lys	Ile	Tyr												

<210> 163
 <211> 226
 <212> PRT
 <213> Bovine

<400>	163														
Cys	Thr	Cys	Leu	Asp	Gly	Ser	Val	Gly	Cys	Val	Pro	Leu	Cys	Ser	Val
1				5					10					15	
Asp	Val	Arg	Leu	Pro	Ser	Pro	Asp	Cys	Pro	Phe	Pro	Arg	Arg	Val	Lys
			20					25					30		
Leu	Pro	Gly	Lys	Cys	Cys	Glu	Glu	Trp	Val	Cys	Asp	Glu	Pro	Lys	Glu
		35					40					45			
His	Thr	Val	Val	Gly	Pro	Ala	Leu	Ala	Ala	Tyr	Arg	Pro	Glu	Asp	Thr
	50					55					60				
Phe	Gly	Pro	Asp	Pro	Thr	Met	Ile	Arg	Ala	Asn	Cys	Leu	Val	Gln	Thr
65					70					75					80
Thr	Glu	Trp	Ser	Ala	Cys	Ser	Lys	Thr	Cys	Gly	Met	Gly	Ile	Ser	Thr
				85					90					95	
Arg	Val	Thr	Asn	Asp	Asn	Ala	Phe	Cys	Arg	Leu	Glu	Lys	Gln	Ser	Arg
			100					105					110		
Leu	Cys	Met	Val	Arg	Pro	Cys	Glu	Ala	Asp	Leu	Glu	Glu	Asn	Ile	Lys
		115					120					125			
Lys	Gly	Lys	Lys	Cys	Ile	Arg	Thr	Pro	Lys	Ile	Ser	Lys	Pro	Ile	Lys
	130					135					140				
Phe	Glu	Leu	Ser	Gly	Cys	Thr	Ser	Met	Lys	Thr	Tyr	Arg	Ala	Lys	Phe
145					150					155					160
Cys	Gly	Val	Cys	Thr	Asp	Gly	Arg	Cys	Cys	Thr	Pro	His	Arg	Thr	Thr
				165				170						175	

Thr	Leu	Pro	Val	Glu	Phe	Lys	Cys	Pro	Asp	Gly	Glu	Val	Met	Lys	Lys
			180					185					190		
Ser	Met	Met	Phe	Ile	Lys	Thr	Cys	Ala	Cys	His	Tyr	Asn	Cys	Pro	Gly
		195					200					205			
Asp	Asn	Asp	Ile	Phe	Glu	Ser	Leu	Tyr	Tyr	Arg	Lys	Met	Tyr	Gly	Asp
	210					215					220				
Met	Ala														
225															

<210> 164
 <211> 164
 <212> PRT
 <213> Bovine

<400> 164															
Met	Val	Asn	Pro	Thr	Val	Phe	Phe	Asp	Ile	Ala	Val	Asp	Gly	Glu	Pro
1				5					10					15	
Leu	Gly	Arg	Val	Ser	Phe	Glu	Leu	Phe	Ala	Asp	Lys	Val	Pro	Lys	Thr
			20					25					30		
Ala	Glu	Asn	Phe	Arg	Ala	Leu	Ser	Thr	Gly	Glu	Lys	Gly	Phe	Gly	Tyr
		35					40					45			
Lys	Gly	Ser	Cys	Phe	His	Arg	Ile	Ile	Pro	Gly	Phe	Met	Cys	Gln	Gly
	50					55					60				
Gly	Asp	Phe	Thr	Arg	His	Asn	Gly	Thr	Gly	Gly	Lys	Ser	Ile	Tyr	Gly
65					70					75					80
Glu	Lys	Phe	Asp	Asp	Glu	Asn	Phe	Ile	Leu	Lys	His	Thr	Gly	Pro	Gly
				85					90					95	
Ile	Leu	Ser	Met	Ala	Asn	Ala	Gly	Pro	Asn	Thr	Asn	Gly	Ser	Gln	Phe
			100					105					110		
Phe	Ile	Cys	Thr	Ala	Lys	Thr	Glu	Trp	Leu	Asp	Gly	Lys	His	Val	Val
		115					120					125			
Phe	Gly	Lys	Val	Lys	Glu	Gly	Met	Asn	Ile	Val	Glu	Ala	Met	Glu	Arg
	130					135					140				
Phe	Gly	Ser	Arg	Asn	Gly	Lys	Thr	Ser	Lys	Lys	Ile	Thr	Ile	Ala	Asp
145					150					155					160
Cys	Gly	Gln	Ile												

<210> 165
 <211> 94
 <212> PRT
 <213> Bovine

<400> 165															
His	Glu	Leu	Glu	Arg	Thr	Gly	His	Tyr	Leu	Thr	Val	Lys	Asp	Asn	Gln
1				5					10					15	
Val	Val	Gln	Leu	His	Pro	Ser	Thr	Val	Leu	Asp	His	Lys	Pro	Glu	Trp
			20					25					30		
Val	Leu	Tyr	Asn	Glu	Phe	Val	Leu	Thr	Thr	Lys	Asn	Tyr	Ile	Arg	Thr
		35					40					45			
Cys	Thr	Asp	Ile	Lys	Pro	Glu	Trp	Leu	Val	Lys	Ile	Ala	Pro	Gln	Tyr
	50					55					60				
Tyr	Asp	Met	Ser	Asn	Phe	Pro	Gln	Cys	Glu	Ala	Lys	Arg	Gln	Leu	Asp
65					70					75					80
Arg	Ile	Ile	Ala	Lys	Leu	Gln	Ser	Lys	Glu	Tyr	Ser	Gln	Tyr		
				85					90						

<210> 166
 <211> 103
 <212> PRT
 <213> Bovine

<400> 166
 Met Ala Ala Phe Ser Glu Met Gly Val Met Pro Glu Ile Ala Gln Ala
 1 5 10 15
 Val Glu Glu Met Asp Trp Leu Leu Pro Thr Asp Ile Gln Ala Glu Ser
 20 25 30
 Ile Pro Leu Ile Leu Gly Gly Gly Asp Val Leu Met Ala Ala Glu Thr
 35 40 45
 Gly Ser Gly Lys Thr Gly Ala Phe Ser Ile Pro Val Ile Gln Ile Val
 50 55 60
 Tyr Glu Thr Leu Lys Asp Gln Gln Glu Gly Lys Lys Gly Lys Ala Thr
 65 70 75 80
 Ile Lys Thr Gly Ala Ser Val Leu Asn Lys Trp Glu Asn Asp Glu Cys
 85 90 95
 Ala Gln Lys Lys Ile Ile Ala
 100

<210> 167
 <211> 136
 <212> PRT
 <213> Bovine

<400> 167
 Met Ala Gly Lys Lys Val Leu Ile Val Tyr Ala His Gln Glu Pro Arg
 1 5 10 15
 Ser Leu Asn Gly Ser Leu Lys Asp Val Ala Val Ala Glu Leu Ser Gln
 20 25 30
 Gln Gly Cys Ser Val Ile Val Ser Asp Leu Tyr Ala Met Asn Phe Glu
 35 40 45
 Pro Arg Ala Thr Gly Lys Asp Ile Thr Gly Thr Leu Ser Asn Pro Gly
 50 55 60
 Phe Phe Asn Tyr Gly Val Glu Ala His Lys Ala Tyr Lys Lys Gln Ser
 65 70 75 80
 Leu Ser Ser Asp Ile Ile Glu Glu Gln Lys Lys Leu Gln Glu Ala Asp
 85 90 95
 Leu Val Ile Phe Gln Phe Pro Leu Tyr Trp Phe Ser Val Pro Ala Val
 100 105 110
 Leu Lys Gly Trp Met Asp Arg Val Leu Cys Gln Gly Phe Ala Phe Asp
 115 120 125
 Phe Pro Gly Ser Tyr Asp Asp Gly
 130 135

<210> 168
 <211> 105
 <212> PRT
 <213> Bovine

<400> 168
 Ala Pro Leu His Ser Val Leu Ser Asn Val Glu Val Thr Leu Asn Val
 1 5 10 15
 Leu Ala Asp Ser Val Leu Met Glu Gln Pro Pro Leu Arg Arg Arg Lys
 20 25 30
 Leu Glu His Leu Ile Thr Glu Leu Val His Gln Arg Asp Val Thr Arg

		35				40				45						
Ser	Leu	Ile	Lys	Ser	Arg	Val	Asp	Asn	Ala	Lys	Ser	Phe	Glu	Trp	Leu	
50						55					60					
Ser	Gln	Met	Arg	Phe	Tyr	Phe	Asp	Pro	Lys	Gln	Thr	Asp	Val	Leu	Gln	
65					70					75					80	
Gln	Leu	Ser	Ile	Gln	Met	Ala	Asn	Ala	Lys	Phe	Asn	Tyr	Gly	Phe	Glu	
			85					90						95		
Tyr	Leu	Gly	Val	Gln	Asp	Lys	Ala	Gly								
			100					105								

<210> 169
 <211> 303
 <212> PRT
 <213> Bovine

<400> 169																
Met	Gly	Lys	Glu	Lys	Thr	His	Ile	Asn	Ile	Val	Val	Ile	Gly	His	Val	
1				5				10					15			
Asp	Ser	Gly	Lys	Ser	Thr	Thr	Thr	Gly	His	Leu	Ile	Tyr	Lys	Cys	Gly	
			20					25					30			
Gly	Ile	Asp	Lys	Arg	Thr	Ile	Glu	Lys	Phe	Glu	Lys	Glu	Ala	Ala	Glu	
		35					40					45				
Met	Gly	Lys	Gly	Ser	Phe	Lys	Tyr	Ala	Trp	Val	Leu	Asp	Lys	Leu	Lys	
50						55					60					
Ala	Glu	Arg	Glu	Arg	Gly	Ile	Thr	Ile	Asp	Ile	Ser	Leu	Trp	Lys	Phe	
65				70					75						80	
Glu	Thr	Ser	Lys	Tyr	Tyr	Val	Thr	Ile	Ile	Asp	Ala	Pro	Gly	His	Arg	
			85					90						95		
Asp	Phe	Ile	Lys	Asn	Met	Ile	Thr	Gly	Thr	Ser	Gln	Ala	Asp	Cys	Ala	
			100					105					110			
Val	Leu	Ile	Val	Ala	Ala	Gly	Val	Gly	Glu	Phe	Glu	Ala	Gly	Ile	Ser	
		115					120					125				
Lys	Asn	Gly	Gln	Thr	Arg	Glu	His	Ala	Leu	Leu	Ala	Tyr	Thr	Leu	Gly	
	130					135					140					
Val	Lys	Gln	Leu	Ile	Val	Gly	Val	Asn	Lys	Met	Asp	Ser	Thr	Glu	Pro	
145					150					155					160	
Pro	Tyr	Ser	Gln	Lys	Arg	Tyr	Glu	Glu	Ile	Val	Lys	Glu	Val	Ser	Thr	
			165					170						175		
Tyr	Ile	Lys	Lys	Ile	Gly	Tyr	Asn	Pro	Asp	Thr	Val	Ala	Phe	Val	Pro	
			180				185						190			
Ile	Ser	Gly	Trp	Asn	Gly	Asp	Asn	Met	Leu	Glu	Pro	Ser	Ala	Asn	Met	
		195				200						205				
Pro	Trp	Phe	Lys	Gly	Trp	Lys	Val	Thr	Arg	Lys	Asp	Gly	Asn	Ala	Ser	
						215					220					
Gly	Thr	Thr	Leu	Leu	Glu	Ala	Leu	Asp	Cys	Ile	Leu	Pro	Pro	Thr	Arg	
225					230					235					240	
Pro	Thr	Asp	Lys	Pro	Leu	Arg	Leu	Pro	Leu	Gln	Asp	Val	Tyr	Lys	Ile	
			245					250						255		
Gly	Gly	Ile	Gly	Thr	Val	Pro	Val	Gly	Arg	Val	Glu	Thr	Gly	Val	Leu	
		260						265					270			
Lys	Pro	Gly	Met	Val	Val	Thr	Phe	Ala	Pro	Val	Asn	Val	Thr	Thr	Glu	
		275					280				285					
Val	Lys	Ser	Val	Glu	Met	Arg	His	Glu	Ala	Leu	Ser	Glu	Ala	Leu		
		290				295					300					

<210> 170
 <211> 93

<212> PRT
<213> Bovine

<400> 170

Trp	Phe	Leu	Thr	Cys	Ile	Asn	Gln	Pro	Gln	Phe	Arg	Ala	Val	Leu	Gly
1				5					10					15	
Glu	Val	Lys	Leu	Cys	Glu	Lys	Met	Ala	Gln	Phe	Asp	Ala	Lys	Lys	Phe
			20					25					30		
Ala	Glu	Ser	Gln	Pro	Lys	Lys	Asp	Thr	Pro	Arg	Lys	Glu	Lys	Gly	Ser
		35					40					45			
Arg	Glu	Glu	Lys	Leu	Lys	Pro	Gln	Ala	Glu	Arg	Lys	Glu	Gly	Lys	Glu
	50					55				60					
Glu	Lys	Lys	Ala	Ala	Ala	Pro	Ala	Pro	Glu	Glu	Glu	Leu	Asp	Glu	Cys
65					70					75					80
Glu	Gln	Ala	Leu	Ala	Ala	Glu	Pro	Lys	Ala	Lys	Asp	Pro			
				85						90					

<210> 171
<211> 55
<212> PRT
<213> Bovine

<400> 171

Asn	Lys	Tyr	Asp	Asp	Asp	Gly	Glu	Gly	Ile	Thr	Leu	Phe	Arg	Pro	Ser
1				5					10					15	
His	Leu	Thr	Asn	Lys	Phe	Glu	Asp	Lys	Thr	Val	Ala	Tyr	Thr	Glu	Gln
			20					25					30		
Lys	Met	Thr	Ser	Gly	Lys	Ile	Lys	Arg	Phe	Ile	Gln	Glu	Asn	Ile	Phe
		35					40					45			
Gly	Ile	Cys	Pro	His	Met	Thr									
	50					55									

<210> 172
<211> 132
<212> PRT
<213> Bovine

<400> 172

Met	Cys	Asp	Ala	Phe	Val	Gly	Thr	Trp	Lys	Leu	Val	Ser	Ser	Glu	Asn
1				5					10					15	
Phe	Asp	Asp	Tyr	Met	Lys	Glu	Val	Gly	Val	Gly	Phe	Ala	Thr	Arg	Lys
			20					25					30		
Val	Ala	Gly	Met	Ala	Lys	Pro	Thr	Leu	Ile	Ile	Ser	Leu	Asn	Gly	Gly
		35					40					45			
Val	Val	Thr	Ile	Lys	Ser	Glu	Ser	Thr	Phe	Lys	Asn	Thr	Glu	Ile	Ser
	50					55					60				
Phe	Lys	Leu	Gly	Gln	Glu	Phe	Asp	Glu	Ile	Thr	Pro	Asp	Asp	Arg	Lys
65					70				75						80
Val	Lys	Ser	Ile	Val	Asn	Leu	Asp	Glu	Gly	Ala	Leu	Val	Gln	Val	Gln
				85					90					95	
Asn	Trp	Asp	Gly	Lys	Ser	Thr	Thr	Ile	Lys	Arg	Lys	Leu	Val	Asp	Asp
			100					105				110			
Lys	Met	Val	Leu	Glu	Cys	Val	Met	Asn	Gly	Val	Thr	Ala	Thr	Thr	Val
		115					120					125			
Tyr	Glu	Arg	Ala												
			130												

<210> 173
 <211> 138
 <212> PRT
 <213> Bovine

<400> 173
 Met Val Asp Ala Phe Val Gly Thr Trp Lys Leu Val Asp Ser Lys Asn
 1 5 10 15
 Phe Asp Asp Tyr Met Lys Ser Leu Gly Val Gly Phe Ala Thr Arg Gln
 20 25 30
 Val Gly Asn Met Thr Lys Pro Thr Thr Ile Ile Glu Val Asn Gly Asp
 35 40 45
 Thr Val Ile Ile Lys Thr Gln Ser Thr Phe Lys Asn Thr Glu Ile Ser
 50 55 60
 Phe Lys Leu Gly Val Glu Phe Asp Glu Thr Thr Ala Asp Asp Arg Lys
 65 70 75 80
 Val Lys Ser Ile Val Thr Leu Asp Gly Gly Lys Leu Val His Val Gln
 85 90 95
 Lys Trp Asn Gly Gln Glu Thr Ser Leu Val Arg Glu Met Val Asp Gly
 100 105 110
 Asn Phe Ile Leu Thr Leu Thr His Gly Thr Ala Ser Cys Thr Arg Thr
 115 120 125
 Tyr Glu Asn Ser Met Thr Ala Ser Leu His
 130 135

<210> 174
 <211> 181
 <212> PRT
 <213> Bovine

<400> 174
 Met Thr Thr Ala Ser Pro Ser Gln Val Arg Gln Asn Tyr His Gln Asp
 1 5 10 15
 Ser Glu Ala Ala Ile Asn Arg Gln Ile Asn Leu Glu Leu Tyr Ala Ser
 20 25 30
 Tyr Val Tyr Leu Ser Met Ser Tyr Tyr Phe Asp Arg Asp Asp Val Ala
 35 40 45
 Leu Lys Asn Phe Ala Lys Tyr Phe Leu His Gln Ser His Glu Glu Arg
 50 55 60
 Glu His Ala Glu Arg Leu Met Lys Leu Gln Asn Gln Arg Gly Gly Arg
 65 70 75 80
 Ile Phe Leu Gln Asp Ile Lys Lys Pro Asp Arg Asp Asp Trp Glu Asn
 85 90 95
 Gly Leu Thr Ala Met Glu Cys Ala Leu Cys Leu Glu Arg Ser Val Asn
 100 105 110
 Gln Ser Leu Leu Glu Leu His Lys Leu Ala Thr Glu Lys Asn Asp Pro
 115 120 125
 His Leu Cys Asp Phe Ile Glu Thr His Tyr Leu Asn Glu Gln Val Glu
 130 135 140
 Ala Ile Lys Glu Leu Gly Asp His Ile Thr Asn Leu Arg Lys Met Gly
 145 150 155 160
 Ala Pro Gly Ser Gly Met Ala Glu Tyr Leu Phe Asp Lys His Thr Leu
 165 170 175
 Gly His Ser Glu Ser
 180

<210> 175

<211> 203
 <212> PRT
 <213> Bovine

<400> 175

Arg	Thr	Lys	Leu	Met	Leu	Met	Ser	Arg	Asn	Glu	Glu	Ala	Thr	Lys	His
1				5					10					15	
Leu	Glu	Cys	Thr	Lys	Gln	Leu	Ala	Ala	Ala	Phe	His	Glu	Glu	Phe	Val
			20					25					30		
Val	Arg	Glu	Asp	Leu	Met	Gly	Leu	Ala	Ile	Gly	Thr	His	Gly	Ser	Asn
		35				40						45			
Ile	Gln	Gln	Ala	Arg	Lys	Val	Pro	Gly	Val	Thr	Ala	Ile	Glu	Leu	Asp
	50					55					60				
Glu	Asp	Thr	Gly	Thr	Phe	Arg	Ile	Tyr	Gly	Glu	Ser	Ala	Asp	Ala	Val
65					70				75					80	
Lys	Lys	Ala	Arg	Gly	Phe	Leu	Glu	Phe	Val	Glu	Asp	Phe	Ile	Gln	Val
			85					90						95	
Pro	Arg	Asn	Leu	Val	Gly	Lys	Val	Ile	Gly	Lys	Asn	Gly	Lys	Val	Ile
		100						105					110		
Gln	Glu	Ile	Val	Asp	Lys	Ser	Gly	Val	Val	Arg	Val	Arg	Ile	Glu	Gly
		115					120					125			
Asp	Asn	Glu	Asn	Lys	Leu	Pro	Arg	Glu	Asp	Gly	Met	Val	Pro	Phe	Val
	130					135					140				
Phe	Val	Gly	Thr	Lys	Glu	Lys	Pro	Trp	Glu	Met	Cys	Lys	Cys	Phe	Ser
145					150				155						160
Glu	Tyr	His	Ile	Ala	Tyr	Leu	Lys	Glu	Val	Gln	Gln	Leu	Arg	Met	Glu
			165					170						175	
Pro	Pro	Ser	Arg	Leu	Met	Glu	Gln	Leu	Arg	Pro	Asp	Leu	Val	Trp	Ala
			180					185					190		
Phe	Arg	Pro	Phe	Phe	Pro	Pro	Arg	Gly	Ala	Leu					
		195					200								

<210> 176
 <211> 110
 <212> PRT
 <213> Bovine

<400> 176

Met	Thr	Leu	Glu	Glu	Leu	Arg	Gly	Gln	Asp	Thr	Val	Pro	Glu	Ser	Thr
1				5					10					15	
Ala	Arg	Met	Gln	Gly	Ala	Gly	Lys	Ala	Leu	His	Glu	Leu	Leu	Leu	Ser
			20					25					30		
Ala	Gln	Arg	Gln	Gly	Cys	Leu	Thr	Ala	Gly	Val	Tyr	Glu	Ser	Ala	Lys
		35				40						45			
Val	Leu	Asn	Val	Asp	Pro	Asp	Asn	Val	Thr	Phe	Cys	Val	Leu	Ala	Ala
	50					55					60				
Asp	Glu	Glu	Asp	Glu	Gly	Asp	Ile	Ala	Leu	Gln	Ile	His	Phe	Thr	Leu
65					70				75					80	
Ile	Gln	Ala	Phe	Cys	Cys	Glu	Asn	Asp	Ile	Asp	Ile	Val	Arg	Val	Gly
			85					90						95	
Asp	Val	Gln	Arg	Leu	Ala	Ala	Ile	Val	Gly	Thr	Gly	Asp	Glu		
			100					105					110		

<210> 177
 <211> 117
 <212> PRT
 <213> Bovine

<400> 177

Glu	Leu	Leu	Ala	Lys	His	Lys	Ser	Leu	Pro	Trp	Lys	Glu	Val	Leu	Arg
1				5					10					15	
Leu	Glu	Glu	Val	Gln	Ala	Lys	Leu	Gly	Ile	Ser	Leu	Glu	Glu	Met	Leu
			20					25					30		
Leu	Ile	Thr	Glu	Asp	Ala	Leu	His	Pro	Glu	Pro	Tyr	Ser	Pro	Glu	Glu
		35					40					45			
Ile	Cys	Lys	Cys	Leu	Gly	Ile	Ser	Leu	Gln	Glu	Leu	Lys	Thr	Gln	Ile
50						55					60				
Leu	Ser	Pro	Asn	Thr	Gln	Asp	Val	Leu	Thr	Phe	Lys	Leu	Tyr	Gln	Arg
65					70					75					80
Ala	Lys	His	Val	Tyr	Ser	Glu	Ala	Ala	Arg	Val	Leu	Gln	Phe	Lys	Lys
			85						90					95	
Ile	Cys	Glu	Glu	Ala	Pro	Asp	Asn	Val	Val	Gln	Leu	Leu	Gly	Glu	Leu
			100					105						110	
Met	Asn	Gln	Ser	His											
			115												

<210> 178

<211> 197

<212> PRT

<213> Bovine

<400> 178

Met	Thr	Glu	Gln	Met	Thr	Leu	Arg	Gly	Thr	Leu	Lys	Gly	His	Asn	Gly
1				5				10						15	
Trp	Val	Thr	Gln	Ile	Ala	Thr	Thr	Pro	Gln	Phe	Pro	Asp	Met	Ile	Leu
			20					25					30		
Ser	Ala	Ser	Arg	Asp	Lys	Thr	Ile	Ile	Met	Trp	Lys	Leu	Thr	Arg	Asp
		35				40						45			
Glu	Thr	Asn	Tyr	Gly	Ile	Pro	Gln	Arg	Ala	Leu	Arg	Gly	His	Ser	His
50					55					60					
Phe	Val	Ser	Asp	Val	Val	Ile	Ser	Ser	Asp	Gly	Gln	Phe	Ala	Leu	Ser
65				70					75						80
Gly	Ser	Trp	Asp	Gly	Thr	Leu	Arg	Leu	Trp	Asp	Leu	Thr	Thr	Gly	Thr
			85					90						95	
Thr	Thr	Arg	Arg	Phe	Val	Gly	His	Thr	Lys	Asp	Val	Leu	Ser	Val	Ala
			100					105						110	
Phe	Ser	Ser	Asp	Asn	Arg	Gln	Ile	Val	Ser	Gly	Ser	Arg	Asp	Lys	Thr
		115				120						125			
Ile	Lys	Leu	Trp	Asn	Thr	Leu	Gly	Val	Cys	Lys	Tyr	Thr	Val	Gln	Asp
130					135						140				
Glu	Ser	His	Ser	Glu	Trp	Val	Ser	Cys	Val	Arg	Phe	Ser	Pro	Asn	Ser
145				150						155					160
Ser	Asn	Pro	Ile	Ile	Val	Ser	Cys	Gly	Trp	Asp	Lys	Leu	Val	Lys	Val
			165					170						175	
Trp	Asn	Leu	Ala	Asn	Cys	Lys	Ala	Glu	Asp	Gln	Ser	His	Arg	Pro	His
			180					185						190	
Arg	Leu	Pro	Glu	His											
			195												

<210> 179

<211> 266

<212> PRT

<213> Bovine

<400> 179

Ala	Leu	Ser	Ser	Met	Val	Thr	Val	Pro	Gly	Ser	Thr	Ser	Gly	Gln	Thr
1				5					10					15	
Phe	Thr	Cys	Asn	Val	Ala	His	Pro	Ala	Ser	Ser	Thr	Lys	Val	Asp	Lys
			20					25					30		
Ala	Val	Asp	Pro	Thr	Cys	Lys	Pro	Ser	Pro	Cys	Asp	Cys	Cys	Pro	Pro
		35					40					45			
Pro	Glu	Leu	Pro	Gly	Gly	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Lys	Pro
	50					55					60				
Lys	Asp	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Pro	Glu	Val	Thr	Cys	Val	Val
65					70					75					80
Val	Asp	Val	Gly	His	Asp	Asp	Pro	Glu	Val	Lys	Phe	Ser	Trp	Phe	Val
				85					90					95	
Asp	Asn	Val	Glu	Val	Asn	Thr	Ala	Thr	Thr	Lys	Pro	Arg	Glu	Glu	Gln
			100					105					110		
Phe	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Ala	Leu	Arg	Ile	Gln	His	Gln
			115				120					125			
Asp	Trp	Thr	Gly	Gly	Lys	Glu	Phe	Thr	Cys	Lys	Val	His	Asn	Glu	Gly
	130					135					140				
Leu	Pro	Ala	Pro	Ile	Val	Arg	Thr	Ile	Ser	Arg	Thr	Lys	Gly	Gln	Ala
145					150					155					160
Arg	Glu	Pro	Gln	Val	Tyr	Val	Leu	Ala	Pro	Pro	Gln	Glu	Glu	Leu	Ser
			165						170					175	
Lys	Ser	Thr	Val	Ser	Leu	Thr	Cys	Met	Val	Thr	Ser	Phe	Tyr	Pro	Asp
			180					185					190		
Tyr	Ile	Ala	Val	Glu	Trp	Gln	Arg	Asn	Gly	Gln	Pro	Glu	Ser	Glu	Asp
	195						200					205			
Lys	Tyr	Gly	Thr	Thr	Pro	Pro	Gln	Leu	Asp	Ala	Asp	Ser	Ser	Tyr	Phe
	210					215					220				
Leu	Tyr	Ser	Lys	Leu	Arg	Val	Asp	Arg	Asn	Ser	Trp	Gln	Glu	Gly	Asp
225					230					235					240
Thr	Tyr	Thr	Cys	Val	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr
			245						250					255	
Gln	Lys	Ser	Thr	Ser	Lys	Ser	Ala	Gly	Lys						
			260					265							

<210> 180

<211> 212

<212> PRT

<213> Bovine

<400> 180

Arg	Val	Pro	Thr	Thr	Pro	Lys	Thr	Thr	Ile	Pro	Pro	Gly	Lys	Pro	Thr
1				5					10					15	
Thr	Gln	Glu	Ser	Glu	Val	Glu	Lys	Thr	Pro	Cys	Gln	Cys	Ser	Lys	Cys
			20					25					30		
Pro	Glu	Pro	Leu	Gly	Gly	Leu	Ser	Val	Phe	Ile	Phe	Pro	Pro	Lys	Pro
		35					40					45			
Lys	Asp	Thr	Leu	Thr	Ile	Ser	Gly	Thr	Pro	Glu	Val	Thr	Cys	Val	Val
	50					55					60				
Val	Asp	Val	Gly	Gln	Asp	Asp	Pro	Glu	Val	Gln	Phe	Ser	Trp	Phe	Val
65					70					75					80
Asp	Asp	Val	Glu	Val	His	Thr	Ala	Arg	Thr	Lys	Pro	Arg	Glu	Glu	Gln
				85					90					95	
Phe	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Ala	Leu	Arg	Ile	Gln	His	Gln
			100					105					110		
Asp	Trp	Leu	Gln	Gly	Lys	Glu	Phe	Lys	Cys	Lys	Val	Asn	Asn	Lys	Gly

	115		120		125										
Leu	Pro	Ala	Pro	Ile	Val	Arg	Thr	Ile	Ser	Arg	Thr	Lys	Gly	Gln	Ala
	130					135					140				
Arg	Glu	Pro	Gln	Val	Tyr	Val	Leu	Ala	Pro	Pro	Arg	Glu	Glu	Leu	Ser
145					150					155					160
Lys	Ser	Thr	Leu	Ser	Leu	Thr	Cys	Leu	Ile	Thr	Gly	Phe	Tyr	Pro	Glu
			165						170					175	
Glu	Ile	Asp	Val	Glu	Trp	Gln	Arg	Asn	Gly	Gln	Pro	Glu	Ser	Glu	Asp
		180						185					190		
Lys	Tyr	His	Thr	Thr	Ala	Pro	Gln	Leu	Asp	Ala	Asp	Gly	Phe	Leu	Leu
	195						200					205			
Ser	Val	Gln	Glu												
	210														

<210> 181
 <211> 131
 <212> PRT
 <213> Bovine

<400> 181															
Asn	Thr	Gln	His	Glu	Thr	Val	Thr	Tyr	Leu	Pro	Gly	His	Lys	Leu	Pro
1				5					10					15	
Pro	Asn	Val	Val	Ala	Val	Pro	Asp	Val	Val	Gln	Ala	Ala	Ala	Asp	Ala
			20					25					30		
Asp	Ile	Leu	Ile	Phe	Val	Val	Pro	His	Gln	Phe	Ile	Gly	Lys	Ile	Cys
	35						40					45			
Asp	Gln	Leu	Lys	Gly	His	Leu	Lys	Ala	Asp	Thr	Ile	Gly	Val	Ser	Leu
	50					55				60					
Ile	Lys	Gly	Val	Asp	Glu	Gly	Pro	Lys	Gly	Leu	Lys	Leu	Ile	Ser	Glu
65					70					75					80
Val	Ile	Gly	Glu	Arg	Leu	Gly	Ile	Pro	Met	Ser	Val	Leu	Met	Gly	Ala
				85				90						95	
Asn	Ile	Ala	Asn	Glu	Val	Ala	Asp	Glu	Thr	Phe	Cys	Glu	Thr	Thr	Ile
		100						105					110		
Gly	Ser	Lys	Asn	Gln	Ala	His	Gly	Gln	Leu	Leu	Lys	Glu	Leu	Met	Gln
	115						120					125			
Thr	Pro	Asn													
	130														

<210> 182
 <211> 104
 <212> PRT
 <213> Bovine

<400> 182															
Asp	Pro	Trp	Pro	Glu	Pro	Arg	Pro	Pro	Pro	Pro	Gly	Ser	Ser	Ala	
1				5				10					15		
Gln	Arg	Cys	Cys	Ser	Cys	Ser	Trp	Trp	Pro	Pro	Ala	Gly	Ala	Gln	Gln
			20					25				30			
Val	Arg	Pro	Gly	Ala	Arg	Asp	Pro	Leu	Gly	Arg	Thr	Gly	Thr	Gly	Gly
	35						40					45			
Tyr	Pro	Trp	Gly	Gln	Pro	Leu	Thr	His	Ser	Val	Leu	Pro	Ala	Gly	Ala
	50					55				60					
Pro	Val	Val	Asn	Glu	Leu	Arg	Cys	His	Cys	Leu	Gln	Thr	Leu	Gln	Gly
65					70					75					80
Ile	His	Leu	Lys	Asn	Ile	Gln	Ser	Val	Lys	Val	Thr	Pro	Pro	Gly	Pro
				85					90					95	

His Cys Gly Gln Thr Glu Val Met
100

<210> 183
<211> 79
<212> PRT
<213> Bovine

<400> 183
His Ile Ser Leu Ala Asp Leu Val Ala Ile Thr Glu Leu Met His Pro
1 5 10 15
Val Gly Ala Gly Cys Gln Val Phe Lys Gly Arg Pro Lys Leu Ala Ala
20 25 30
Trp Arg Gln Arg Val Glu Ala Ala Val Gly Glu Val Leu Phe Gln Glu
35 40 45
Ala His Glu Val Ile Leu Lys Ala Lys Asp Ser Gln Pro Ala Asp Pro
50 55 60
Thr Leu Lys Gln Lys Met Leu Pro Lys Val Leu Ala Met Ile Gln
65 70 75

<210> 184
<211> 115
<212> PRT
<213> Bovine

<400> 184
Gly Ser Gly Thr Thr Leu Thr Val Leu Gly Gln Pro Lys Ser Ala Pro
1 5 10 15
Ser Val Thr Leu Phe Pro Pro Ser Lys Glu Glu Leu Asp Thr Asn Lys
20 25 30
Ala Thr Leu Val Cys Leu Ile Ser Asp Phe Tyr Pro Gly Ser Val Thr
35 40 45
Val Val Trp Lys Ala Asp Gly Ser Thr Ile Thr Arg Asp Val Lys Thr
50 55 60
Thr Arg Pro Ser Lys Gln Ser Asn Ser Lys Tyr Ala Ala Ser Ser Tyr
65 70 75 80
Leu Ser Leu Thr Asp Ser Asp Trp Lys Ser Lys Gly Ser Tyr Ser Cys
85 90 95
Glu Val Thr His Asp Gly Ser Thr Val Thr Lys Thr Val Lys Pro Ser
100 105 110
Glu Cys Pro
115

<210> 185
<211> 160
<212> PRT
<213> Bovine

<400> 185
Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Asp Thr Ala
1 5 10 15
Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Glu Ala Asp Tyr Phe
20 25 30
Cys Gly Thr Gly Asp Tyr Ser Ile Asn Ile Val Val Phe Gly Ser Gly
35 40 45
Thr Thr Leu Thr Val Leu Gly Gln Pro Lys Ser Ala Pro Ser Val Thr
50 55 60

Leu	Phe	Pro	Pro	Ser	Lys	Glu	Glu	Leu	Asp	Thr	Asn	Lys	Ala	Thr	Leu
65					70				75						80
Val	Cys	Leu	Ile	Ser	Asp	Phe	Tyr	Pro	Gly	Ser	Val	Thr	Val	Val	Trp
				85					90					95	
Lys	Ala	Asp	Gly	Ser	Thr	Ile	Thr	Arg	Asp	Val	Lys	Thr	Thr	Arg	Pro
			100					105					110		
Ser	Lys	Gln	Ser	Asn	Ser	Lys	Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu
		115					120					125			
Thr	Asp	Ser	Asp	Trp	Lys	Ser	Lys	Gly	Ser	Tyr	Ser	Cys	Glu	Val	Thr
	130					135					140				
His	Asp	Gly	Ser	Thr	Val	Thr	Lys	Thr	Val	Lys	Pro	Ser	Glu	Cys	Pro
145					150					155					160

<210> 186
 <211> 136
 <212> PRT
 <213> Bovine

<400> 186															
Arg	Ala	Thr	Gly	Asp	Phe	Asp	Ser	Lys	Pro	Ser	Trp	Ala	Asp	Gln	Val
1				5					10					15	
Glu	Glu	Glu	Gly	Glu	Asp	Asp	Lys	Cys	Val	Thr	Ser	Glu	Leu	Leu	Lys
			20					25					30		
Gly	Ile	Pro	Leu	Ala	Thr	Gly	Asp	Thr	Ser	Pro	Glu	Pro	Glu	Leu	Leu
		35				40					45				
Pro	Gly	Ala	Pro	Leu	Pro	Pro	Pro	Lys	Glu	Val	Ile	Asn	Gly	Asn	Ile
	50				55					60					
Lys	Thr	Val	Thr	Glu	Tyr	Lys	Ile	Asp	Glu	Asp	Gly	Lys	Lys	Phe	Lys
65				70					75					80	
Ile	Val	Arg	Thr	Phe	Arg	Ile	Glu	Thr	Arg	Lys	Ala	Ser	Lys	Ala	Val
				85				90						95	
Ala	Arg	Arg	Lys	Asn	Trp	Lys	Lys	Phe	Gly	Asn	Ser	Glu	Phe	Asp	Pro
			100					105					110		
Pro	Gly	Pro	Asn	Val	Ala	Thr	Thr	Thr	Val	Ser	Asp	Asp	Val	Ser	Met
		115					120					125			
Thr	Phe	Ile	Thr	Ser	Lys	Glu	Asp								
	130					135									

<210> 187
 <211> 161
 <212> PRT
 <213> Bovine

<400> 187															
Tyr	Thr	Gly	Val	Pro	Asp	Arg	Phe	Thr	Gly	Ser	Gly	Ser	Glu	Thr	Asp
1				5					10					15	
Phe	Thr	Leu	Thr	Ile	Ser	Asn	Val	Gln	Ala	Glu	Asp	Ala	Gly	Val	Tyr
		20						25					30		
Tyr	Cys	Leu	Gln	Ser	Thr	Tyr	Thr	Pro	His	Thr	Phe	Gly	Gln	Gly	Thr
		35				40						45			
Lys	Val	Glu	Ile	Lys	Gly	Ser	Asp	Ala	Glu	Pro	Ser	Val	Phe	Leu	Phe
	50				55					60					
Lys	Pro	Ser	Asp	Glu	Gln	Leu	Lys	Thr	Gly	Thr	Val	Ser	Val	Val	Cys
65				70					75					80	
Leu	Val	Asn	Asp	Phe	Tyr	Pro	Lys	Asp	Ile	Asn	Val	Lys	Trp	Lys	Val
				85				90					95		
Asp	Gly	Val	Thr	Gln	Ser	Ser	Ser	Asn	Phe	Gln	Asn	Ser	Phe	Thr	Asp

			100					105				110				
Gln	Asp	Ser	Lys	Lys	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Ile	Leu	Thr	Leu	
		115					120					125				
Pro	Ser	Ser	Glu	Tyr	Gln	Ser	His	Asp	Ala	Tyr	Thr	Cys	Glu	Val	Ser	
	130					135					140					
His	Lys	Ser	Leu	Thr	Thr	Thr	Leu	Val	Lys	Ser	Phe	Ser	Lys	Asn	Glu	
145					150					155					160	
Cys																

<210> 188
 <211> 185
 <212> PRT
 <213> Bovine

<400> 188																
Gly	Tyr	Val	Ser	Trp	Tyr	Gln	Leu	Thr	Pro	Gly	Ser	Ala	Pro	Arg	Thr	
1				5					10					15		
Leu	Met	Tyr	Gly	Asp	Thr	Gly	Leu	Ala	Ser	Gly	Val	Pro	Asp	Arg	Phe	
			20					25					30			
Ser	Asp	Ser	Arg	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Asn	Ser	Leu	
		35				40						45				
Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Phe	Cys	Ala	Ser	Ala	Glu	Glu	Ser	
	50					55					60					
Ser	Ser	Lys	Val	Leu	Phe	Gly	Ser	Gly	Thr	Thr	Val	Thr	Val	Leu	Gly	
65					70					75					80	
Gln	Pro	Lys	Ser	Pro	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Thr	Glu	
			85						90					95		
Glu	Leu	Asn	Gly	Asn	Lys	Ala	Thr	Leu	Val	Cys	Leu	Ile	Ser	Asp	Phe	
			100					105					110			
Tyr	Pro	Gly	Ser	Val	Thr	Val	Val	Trp	Lys	Ala	Asp	Gly	Ser	Thr	Ile	
		115					120					125				
Thr	Arg	Asn	Val	Glu	Thr	Thr	Arg	Ala	Ser	Lys	Gln	Ser	Asn	Ser	Lys	
	130					135						140				
Tyr	Ala	Ala	Ser	Ser	Tyr	Leu	Ser	Leu	Thr	Ser	Ser	Asp	Trp	Lys	Ser	
145					150					155					160	
Lys	Gly	Ser	Tyr	Ser	Cys	Glu	Val	Thr	His	Glu	Gly	Ser	Thr	Val	Thr	
				165					170					175		
Lys	Thr	Val	Lys	Pro	Ser	Glu	Cys	Ser								
			180					185								

<210> 189
 <211> 115
 <212> PRT
 <213> Bovine

<400> 189																
Leu	Lys	Glu	Lys	Leu	Ile	Ala	Pro	Val	Ala	Glu	Glu	Glu	Thr	Arg	Ile	
1				5					10					15		
Pro	Asn	Asn	Lys	Ile	Thr	Val	Val	Gly	Val	Gly	Gln	Val	Gly	Met	Ala	
			20					25					30			
Cys	Ala	Ile	Ser	Ile	Leu	Gly	Lys	Ser	Leu	Thr	Asp	Glu	Leu	Ala	Leu	
		35					40					45				
Val	Asp	Val	Leu	Glu	Asp	Lys	Leu	Lys	Gly	Glu	Met	Met	Asp	Leu	Gln	
	50					55					60					
His	Gly	Ser	Leu	Phe	Leu	Gln	Thr	Pro	Lys	Ile	Val	Ala	Asp	Lys	Asp	
65					70					75					80	

Tyr Ser Val Thr Ala Asn Ser Lys Ile Val Val Val Thr Ala Gly Val
85 90 95
Arg Gln Gln Glu Gly Glu Ser Arg Leu Asn Leu Val Gln Arg Asn Val
100 105 110
Asn Val Phe
115

<210> 190
<211> 119
<212> PRT
<213> Bovine

<400> 190
Ala Leu Gly Ser Ala Gly Leu Leu Phe Cys Pro Arg Ser Arg Leu Val
1 5 10 15
Pro Cys Ile Ser Tyr Arg Gly Thr Ser Pro Glu Met Glu Ser Lys Ala
20 25 30
Leu Leu Leu Leu Ala Leu Ser Val Cys Leu Gln Ser Leu Thr Val Ser
35 40 45
Arg Gly Gly Leu Val Ala Ala Asp Arg Ile Thr Gly Gly Lys Asp Phe
50 55 60
Arg Asp Ile Glu Ser Lys Phe Ala Leu Arg Thr Pro Glu Asp Thr Ala
65 70 75 80
Glu Asp Thr Cys His Leu Ile Pro Gly Val Thr Glu Ser Val Ala Asn
85 90 95
Cys His Phe Asn His Ser Ser Lys Thr Phe Val Gly Ile His Gly Trp
100 105 110
Thr Val Thr Gly Met Tyr Glu
115

<210> 191
<211> 102
<212> PRT
<213> Bovine

<400> 191
Met Arg Leu Ser Val Thr Ala Leu Leu Gly Thr Leu Ala Leu Cys Tyr
1 5 10 15
Tyr Lys Ala Asn Ala Ile Val Cys Pro Thr Phe Ala Ala Asp Leu Thr
20 25 30
Glu Phe Phe Tyr Phe Pro Asp Leu Leu Tyr Arg Leu Ser Leu Ala Lys
35 40 45
Tyr Asn Ala Pro Pro Glu Ala Val Ala Ala Lys Met Glu Val Lys Gln
50 55 60
Cys Thr Asp Arg Phe Ser Val Lys Asn Arg Leu Ile Ile Thr Asn Ile
65 70 75 80
Leu Gly Lys Ile Leu Leu Asn Cys Thr Val Thr Asp Val Lys Ala Val
85 90 95
Leu Asn Pro Ser Ser Ala
100

<210> 192
<211> 155
<212> PRT
<213> Bovine

<400> 192

Ile	Thr	Cys	Ser	Gly	Thr	Ser	Ser	Asn	Val	Gly	Asp	Gly	Asp	Tyr	Val
1				5					10					15	
Ser	Trp	Phe	Gln	Gln	Ile	Pro	Gly	Ser	Gly	Pro	Arg	Thr	Val	Ile	Phe
			20					25					30		
Gly	Ala	Thr	Gln	Arg	Pro	Ser	Gly	Val	Ser	Glu	Arg	Phe	Ser	Gly	Ser
			35					40					45		
Arg	Ser	Gly	Asn	Thr	Ala	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu
								55				60			
Asp	Glu	Ala	Asp	Tyr	Phe	Cys	Ser	Ser	Pro	Asp	Thr	Thr	Asn	Asn	Val
65					70					75					80
Ala	Phe	Gly	Ser	Gly	Thr	Thr	Leu	Ser	Val	Leu	Arg	Gln	Arg	Leu	Glu
				85					90					95	
Ile	Glu	Arg	Gln	Leu	Gln	Leu	Arg	Gly	His	Ala	Arg	Arg	Glu	His	Arg
			100					105					110		
Asp	Glu	Asp	Ser	Glu	Ala	Leu	Arg	Val	Ser	Leu	Gly	Pro	Trp	Thr	Pro
			115					120				125			
Thr	Leu	Gly	Gly	Pro	Leu	Ala	His	Thr	Pro	Ser	Pro	Thr	Ser	Pro	Trp
			130				135					140			
Thr	Pro	Glu	Pro	Leu	Pro	Arg	Ser	Pro	Thr	Pro					
145					150					155					

<210> 193
 <211> 102
 <212> PRT
 <213> Bovine

Leu	Val	Tyr	Asp	Phe	Ala	Asn	Phe	Gly	Val	Leu	Arg	Leu	Ser	Glu	Pro
1				5					10					15	
Ala	Pro	Leu	Phe	Asp	Leu	Ala	Met	Leu	Ala	Leu	Asp	Ser	Pro	Glu	Ser
			20					25					30		
Gly	Trp	Thr	Glu	Glu	Asp	Gly	Pro	Lys	Glu	Gly	Leu	Ala	Glu	Tyr	Ile
			35				40					45			
Val	Glu	Phe	Leu	Lys	Lys	Lys	Ala	Glu	Met	Leu	Ala	Asp	Tyr	Phe	Ser
			50				55				60				
Leu	Glu	Ile	Asp	Glu	Glu	Gly	Asn	Leu	Val	Gly	Leu	Pro	Leu	Leu	Ile
65					70					75					80
Asp	Asn	Tyr	Val	Pro	Pro	Leu	Glu	Gly	Leu	Pro	Ile	Phe	Ile	Leu	Arg
			85					90						95	
Leu	Ala	Thr	Glu	Val	Asn										
			100												

<210> 194
 <211> 132
 <212> PRT
 <213> Bovine

Ile	Ser	Tyr	Gln	Val	Gly	Trp	Leu	Ile	Pro	Val	Phe	Cys	Tyr	Arg	Ile
1				5					10					15	
Phe	Asp	Phe	Val	Leu	Ser	Cys	Leu	Val	Ala	Ile	Ser	Ser	Leu	Thr	Tyr
			20					25					30		
Leu	Pro	Arg	Ile	Lys	Glu	Tyr	Leu	Asp	Gln	Leu	Pro	Asp	Phe	Pro	Tyr
			35				40					45			
Lys	Asp	Asp	Leu	Leu	Ala	Leu	Asp	Ser	Ser	Cys	Leu	Leu	Phe	Ile	Val
			50				55				60				
Leu	Val	Phe	Phe	Ala	Leu	Phe	Ile	Ile	Phe	Lys	Ala	Tyr	Leu	Ile	Asn

65					70					75				80
Cys	Val	Trp	Asn	Cys	Tyr	Lys	Tyr	Ile	Asn	Asn	Arg	Asn	Met	Pro Glu
				85					90				95	
Ile	Ala	Val	Tyr	Pro	Ala	Phe	Glu	Ala	Pro	Pro	Gln	Tyr	Val	Leu Pro
			100					105					110	
Thr	Tyr	Glu	Met	Ala	Val	Lys	Met	Pro	Glu	Lys	Glu	Pro	Pro	Pro Pro
		115					120					125		
Tyr	Ile	Pro	Ala											
	130													

<210> 195
 <211> 233
 <212> PRT
 <213> Bovine

<400> 195														
Ala	Pro	Ile	Gly	Val	Phe	Thr	Ile	Pro	Pro	Ser	Phe	Ala	Asp	Ile Phe
1				5				10					15	
Leu	Thr	Lys	Ser	Ala	Lys	Leu	Ser	Cys	Leu	Val	Thr	Asn	Leu	Ala Ser
			20					25					30	
Tyr	Asp	Gly	Leu	Asn	Ile	Ser	Trp	Ser	Arg	Gln	Asn	Gly	Lys	Ala Leu
	35						40					45		
Glu	Thr	His	Thr	Tyr	Phe	Gly	Arg	His	Leu	Asn	Asp	Thr	Phe	Ser Ala
	50					55					60			
Arg	Gly	Glu	Ala	Ser	Val	Cys	Ser	Glu	Asp	Trp	Glu	Ser	Gly	Glu Glu
65					70					75				80
Phe	Thr	Cys	Thr	Val	Ala	His	Ser	Asp	Leu	Pro	Phe	Pro	Glu	Lys Asn
				85					90				95	
Ser	Val	Ser	Lys	Pro	Lys	Asp	Val	Ala	Met	Lys	Pro	Pro	Ser	Val Tyr
			100					105					110	
Leu	Leu	Pro	Pro	Thr	Arg	Glu	Gln	Leu	Ser	Leu	Arg	Glu	Ser	Ala Ser
		115					120					125		
Val	Thr	Cys	Leu	Val	Lys	Gly	Phe	Ala	Pro	Ala	Asp	Val	Phe	Val Gln
	130					135					140			
Trp	Leu	Gln	Arg	Gly	Glu	Pro	Val	Thr	Lys	Ser	Lys	Tyr	Val	Thr Ser
145					150					155				160
Ser	Pro	Ala	Pro	Glu	Pro	Gln	Asp	Pro	Ser	Val	Tyr	Phe	Val	His Ser
			165					170						175
Ile	Leu	Thr	Val	Ala	Glu	Glu	Asp	Trp	Ser	Lys	Gly	Glu	Thr	Tyr Thr
			180					185					190	
Cys	Val	Val	Gly	His	Glu	Ala	Leu	Pro	His	Met	Val	Thr	Glu	Arg Thr
	195						200					205		
Val	Asp	Lys	Ser	Thr	Gly	Lys	Pro	Thr	Leu	Tyr	Asn	Val	Ser	Leu Val
	210					215					220			
Leu	Ser	Asp	Thr	Ala	Ser	Thr	Cys	Tyr						
225					230									

<210> 196
 <211> 248
 <212> PRT
 <213> Bovine

<400> 196														
Pro	Gly	Pro	Gly	Pro	Gly	Pro	Gly	Ser	Asn	Leu	Thr	Ser	Ala	Pro Gly
1				5				10					15	
Pro	Ser	Thr	Thr	Thr	Arg	Ser	Leu	Thr	Ala	Cys	Pro	Glu	Glu	Ser Pro
			20					25					30	

Leu	Leu	Val	Gly	Pro	Met	Leu	Ile	Glu	Phe	Asn	Ile	Pro	Val	Asp	Leu
		35					40					45			
Lys	Leu	Val	Glu	His	Gln	Asn	Pro	Lys	Val	Lys	Leu	Gly	Gly	Arg	Tyr
	50					55					60				
Thr	Pro	Thr	Asp	Cys	Ile	Ser	Pro	His	Lys	Val	Ala	Ile	Ile	Ile	Pro
65					70					75					80
Phe	Arg	Asn	Arg	Gln	Glu	His	Leu	Lys	Tyr	Trp	Leu	Tyr	Tyr	Leu	His
				85					90					95	
Pro	Ile	Leu	Gln	Arg	Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	Asn
			100					105					110		
Gln	Ala	Gly	Glu	Ser	Met	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly
	115						120					125			
Phe	Lys	Glu	Ala	Leu	Lys	Asp	Tyr	Asp	Tyr	Asn	Cys	Phe	Val	Phe	Ser
	130					135					140				
Asp	Val	Asp	Leu	Ile	Pro	Met	Asn	Asp	His	Asn	Thr	Tyr	Arg	Cys	Phe
145					150					155					160
Ser	Gln	Pro	Arg	His	Ile	Ser	Val	Ala	Met	Asp	Lys	Phe	Gly	Phe	Ser
				165					170					175	
Leu	Pro	Tyr	Val	Gln	Tyr	Phe	Gly	Gly	Val	Ser	Ala	Leu	Ser	Lys	Gln
			180					185					190		
Gln	Phe	Leu	Ser	Ile	Asn	Gly	Phe	Pro	Asn	Asn	Tyr	Trp	Gly	Trp	Gly
	195					200						205			
Gly	Glu	Asp	Asp	Asp	Ile	Tyr	Asn	Arg	Leu	Asp	Phe	Lys	Gly	Met	Ser
	210					215					220				
Val	Ser	Arg	Pro	Asn	Ala	Val	Ile	Gly	Lys	Cys	Arg	Met	Ile	Arg	Thr
225					230					235					240
Arg	Glu	Thr	Lys	Lys	Asn	Glu	Pro								
				245											

<210> 197
 <211> 272
 <212> PRT
 <213> Bovine

<400>	197														
Met	Glu	Asp	Ser	Met	Asp	Met	Asp	Met	Ser	Pro	Leu	Arg	Pro	Gln	Asn
1				5					10					15	
Tyr	Leu	Phe	Gly	Cys	Glu	Leu	Lys	Ala	Asp	Arg	Asp	Tyr	His	Phe	Lys
			20					25					30		
Val	Asp	Asn	Asp	Glu	Asn	Glu	His	Gln	Leu	Ser	Leu	Arg	Thr	Val	Ser
		35					40					45			
Leu	Gly	Ala	Gly	Ala	Lys	Asp	Glu	Leu	His	Val	Val	Glu	Ala	Glu	Ala
	50					55					60				
Met	Asn	Tyr	Glu	Gly	Ser	Pro	Ile	Lys	Val	Thr	Leu	Ala	Thr	Leu	Lys
65					70					75					80
Met	Ser	Val	Gln	Pro	Thr	Val	Ser	Leu	Gly	Gly	Phe	Glu	Ile	Thr	Pro
			85						90					95	
Pro	Val	Val	Leu	Arg	Leu	Lys	Cys	Gly	Ser	Gly	Pro	Val	His	Ile	Ser
			100					105					110		
Gly	Gln	His	Leu	Val	Ala	Val	Glu	Glu	Asp	Ala	Glu	Ser	Glu	Glu	Glu
		115					120					125			
Glu	Glu	Glu	Glu	Val	Lys	Leu	Leu	Ser	Ile	Ser	Gly	Lys	Arg	Ser	Ala
	130					135					140				
Pro	Gly	Ser	Gly	Ser	Lys	Val	Pro	Gln	Lys	Lys	Val	Lys	Leu	Ala	Ala
145					150					155					160
Asp	Glu	Asp	Glu	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Glu
				165					170					175	

Asp	Asp	Asp	Asp	Asp	Asp	Phe	Asp	Glu	Glu	Val	Glu	Glu	Lys	Ala	Pro
			180					185					190		
Val	Lys	Lys	Ser	Val	Arg	Asp	Thr	Pro	Ala	Lys	Asn	Ala	Gln	Lys	Ser
		195					200					205			
Asn	Gln	Asn	Gly	Lys	Asp	Ser	Lys	Pro	Ser	Thr	Pro	Arg	Ser	Lys	Gly
	210					215					220				
Gln	Glu	Ser	Phe	Lys	Lys	Gln	Glu	Lys	Thr	Pro	Lys	Thr	Pro	Lys	Gly
225					230					235					240
Pro	Ser	Ser	Val	Glu	Asp	Ile	Lys	Ala	Lys	Met	Gln	Ala	Ser	Ile	Glu
				245					250					255	
Lys	Gly	Gly	Ser	Leu	Pro	Lys	Val	Glu	Ala	Lys	Phe	Ile	Asn	Tyr	Val
			260					265					270		

<210> 198
 <211> 108
 <212> PRT
 <213> Bovine

<220>
 <221> VARIANT
 <222> (1)...(108)
 <223> Xaa = Any Amino Acid

<400> 198

Ala	Ile	Gln	Lys	Lys	Lys	Lys	Lys	Ala	Gly	Gly	Ile	Thr	Cys	Pro	Asp
1			5						10					15	
Phe	Lys	Tyr	Tyr	Lys	Ala	Thr	Val	Ile	Gln	Ile	Ala	Trp	Tyr	Trp	His
		20						25					30		
Lys	Ser	Arg	His	Val	Asp	Gln	Xaa	Ile	Arg	Ala	Glu	Ser	Pro	Glu	Ile
		35				40					45				
Ser	Pro	His	Thr	Tyr	Ser	Gln	Ser	Val	Phe	Asp	Arg	Thr	Asp	Lys	Asp
	50					55				60					
Leu	Gln	Trp	Arg	Asn	Asp	Gly	Leu	Phe	Ser	Lys	Arg	Cys	Trp	Glu	Ser
65					70					75					80
Trp	Ala	Cys	Met	Cys	Ala	Gln	Ser	Leu	Ser	Leu	Ala	Ala	Tyr	Lys	Ser
			85					90						95	
Ile	Lys	Leu	Asp	Thr	Ala	Ser	His	His	Thr	Gln	Lys				
			100					105							

<210> 199
 <211> 139
 <212> PRT
 <213> Bovine

<400> 199

Glu	Lys	Leu	Lys	Glu	Ala	Pro	Glu	Gly	Thr	Phe	Leu	Ile	Arg	Asp	Ser
1			5					10						15	
Ser	His	Ser	Asp	Tyr	Leu	Leu	Thr	Ile	Ser	Val	Lys	Thr	Ser	Ala	Gly
		20						25					30		
Pro	Thr	Asn	Leu	Arg	Ile	Glu	Tyr	Gln	Asp	Gly	Lys	Phe	Arg	Leu	Asp
	35					40					45				
Ser	Ile	Ile	Cys	Val	Lys	Ser	Lys	Leu	Lys	Gln	Phe	Asp	Ser	Val	Val
	50					55				60					
His	Leu	Ile	Asp	Tyr	Tyr	Val	Gln	Met	Cys	Lys	Asp	Lys	Arg	Thr	Gly
65					70					75					80
Pro	Glu	Ala	Pro	Arg	Asn	Gly	Thr	Val	His	Leu	Tyr	Leu	Thr	Lys	Pro
				85				90						95	

Leu Tyr Thr Ser Ala Pro Pro Leu Gln His Leu Cys Arg Leu Thr Ile
 100 105 110
 Asn Lys Cys Thr Ser Thr Val Trp Gly Leu Pro Leu Pro Thr Arg Leu
 115 120 125
 Lys Asp Tyr Leu Glu Glu Tyr Lys Phe Gln Val
 130 135

<210> 200
 <211> 195
 <212> PRT
 <213> Bovine

<400> 200
 Glu Thr Gly Val Leu Lys Pro Gly Met Val Val Thr Phe Ala Pro Val
 1 5 10 15
 Asn Val Thr Thr Glu Val Lys Ser Val Lys Met His His Glu Ala Leu
 20 25 30
 Ser Glu Ala Leu Pro Gly Asp Asn Val Gly Phe Asn Val Lys Asn Val
 35 40 45
 Ser Val Lys Asp Val Arg Arg Gly Asn Val Ala Gly Asp Ser Lys Asn
 50 55 60
 Asp Pro Pro Met Glu Ala Ala Gly Phe Thr Ala Gln Val Ile Ile Leu
 65 70 75 80
 Asn His Pro Gly Gln Ile Ser Ala Gly Tyr Ala Pro Val Leu Asp Cys
 85 90 95
 His Thr Ala His Ile Ala Cys Lys Phe Ala Glu Leu Lys Glu Lys Ile
 100 105 110
 Asp Arg Arg Ser Gly Lys Lys Leu Glu Asp Gly Pro Lys Phe Leu Lys
 115 120 125
 Ser Gly Asp Ala Ala Ile Val Asp Met Val Pro Gly Lys Pro Met Cys
 130 135 140
 Val Glu Ser Phe Ser Asp Tyr Pro Pro Leu Gly Arg Phe Ala Val Arg
 145 150 155 160
 Asp Met Arg Gln Thr Val Ala Val Gly Val Ile Lys Ala Val Asp Lys
 165 170 175
 Lys Ala Ala Gly Ala Gly Lys Val Thr Lys Ser Ala Gln Lys Ala Gln
 180 185 190
 Lys Ala Lys
 195

<210> 201
 <211> 196
 <212> PRT
 <213> Bovine

<400> 201
 Asp Leu Asp Ala Leu Val Gln Phe Leu Ser Ile Gly Thr Leu Leu Ala
 1 5 10 15
 Tyr Thr Phe Met Ala Ile Ser Val Leu Val Leu Arg Phe Gln Thr Ala
 20 25 30
 Ser Gln Ser Arg Ser Pro Ser Leu Ala Gly Ser Gly Pro Lys Ala Lys
 35 40 45
 Glu Tyr Ser Ser Phe Ser Asp His Leu Glu Leu Val Gly Ala Gly His
 50 55 60
 Gly Pro Glu Pro Gly Arg Leu Arg Pro Ala Leu Arg Pro Tyr Leu Gly
 65 70 75 80
 Phe Leu Asp Arg Gly Ser Pro Gly Ala Ala Val Arg Gly Ala Val Cys

				85					90					95			
Gly	Leu	Val	Val	Ser	Ala	Ile	Ala	Leu	Gly	Cys	Val	Leu	Met	Leu	Gly		
			100					105					110				
His	Ser	Val	Leu	Arg	Leu	Pro	Leu	Trp	Gly	Phe	Leu	Leu	Leu	Leu	Leu		
		115					120					125					
Cys	Ser	Ser	Val	Thr	Phe	Leu	Leu	Ser	Leu	Leu	Val	Leu	Gly	Ala	His		
	130					135					140						
Gln	Gln	Gln	Arg	Leu	Lys	Asp	Thr	Phe	Gln	Met	Pro	Leu	Val	Pro	Leu		
145					150					155					160		
Ile	Pro	Ala	Leu	Ser	Ile	Val	Leu	Asn	Phe	Cys	Leu	Met	Leu	Lys	Leu		
				165				170					175				
Ser	Tyr	Leu	Thr	Trp	Val	Arg	Phe	Thr	Ile	Trp	Leu	Leu	Ile	Gly	Leu		
		180						185					190				
Leu	Val	Tyr	Phe														
		195															

<210> 202
 <211> 124
 <212> PRT
 <213> Bovine

Phe	Tyr	Val	Ser	Gln	Pro	Gly	Ser	Ser	Val	Val	Thr	Ser	Leu	Ser	Pro		
1				5					10					15			
Gly	Glu	Ala	Val	Lys	Lys	His	Ile	Gly	Leu	Leu	Arg	Ile	Lys	Gly	Arg		
		20						25					30				
Lys	Met	Asn	Met	Gln	Lys	Ile	Pro	Leu	Arg	Thr	Val	Arg	Gln	Phe	Phe		
		35					40					45					
Met	Glu	Asp	Val	Val	Leu	Ala	Asp	His	Pro	Asp	Ile	Phe	Asn	Pro	Asp		
	50					55					60						
Asn	Pro	Lys	Val	Thr	Gln	Val	Ile	Gln	Asn	Phe	Cys	Leu	Glu	Lys	Val		
65					70					75					80		
Glu	Glu	Met	Leu	Glu	Asn	Ala	Glu	Arg	Glu	Arg	Leu	Gly	Asn	Ser	Gln		
				85				90						95			
Gln	Pro	Glu	Lys	Pro	Leu	Ile	Arg	Leu	Arg	Val	Asp	Tyr	Ser	Gly	Gly		
		100						105						110			
Phe	Glu	Pro	Phe	Ser	Val	Leu	Arg	Phe	Ser	Gln	Lys						
		115					120										

<210> 203
 <211> 114
 <212> PRT
 <213> Bovine

Pro	Thr	Met	Leu	Gln	Asp	Pro	Asp	Val	Arg	Glu	Phe	Leu	Glu	Lys	Glu		
1				5				10						15			
Glu	Leu	Pro	Arg	Ala	Val	Gly	Thr	Gln	Thr	Leu	Ser	Gly	Ala	Gly	Leu		
		20						25					30				
Leu	Lys	Met	Phe	Asn	Lys	Ala	Thr	Asp	Ala	Val	Ser	Lys	Met	Thr	Ile		
		35					40					45					
Lys	Met	Asn	Glu	Ser	Asp	Ile	Trp	Phe	Glu	Glu	Lys	Leu	Gln	Glu	Val		
	50					55					60						
Glu	Cys	Glu	Glu	Gln	Arg	Leu	Arg	Lys	Leu	His	Ala	Val	Val	Glu	Thr		
65					70					75				80			
Leu	Val	Asn	His	Arg	Lys	Glu	Leu	Ala	Leu	Asn	Thr	Ala	Gln	Phe	Ala		
				85				90						95			

Lys Ser Leu Ala Met Leu Gly Ser Ser Glu Asp Asn Thr Ala Leu Ser
 100 105 110
 Arg Ala

<210> 204
 <211> 152
 <212> PRT
 <213> Bovine

<400> 204

Met Ile His Asn Tyr Met Glu His Leu Glu Arg Thr Lys Leu His Gln
 1 5 10 15
 Ile Ser Gly Ser Asp Gln Leu Glu Ser Thr Ala His Ser Arg Ile Arg
 20 25 30
 Lys Glu Arg Pro Ile Ser Leu Gly Ile Phe Pro Leu Pro Ser Gly Asp
 35 40 45
 Gly Leu Leu Thr Pro Asp Thr Gln Lys Gly Gly Glu Thr Pro Gly Ser
 50 55 60
 Glu Gln Trp Lys Phe Gln Glu Leu Ser Gln Pro Arg Ser His Thr Ser
 65 70 75 80
 Leu Lys Asp Glu Leu Ser Asp Val Ser Gln Gly Gly Ser Lys Ala Thr
 85 90 95
 Thr Pro Ala Ser Thr Ala Ala Ser Asp Val Ala Ala Thr Pro Ser Asp
 100 105 110
 Thr Pro Leu His Glu Glu Asn Gly Gly Val Val Glu Val Ala Asp Thr
 115 120 125
 Pro Asp Lys Ser Glu Ile Ser Lys His Ile Ser Ile Pro Leu Thr Glu
 130 135 140
 Thr Asn Lys Thr Ser Gly Ala Ser
 145 150

<210> 205
 <211> 219
 <212> PRT
 <213> Bovine

<400> 205

Ala Leu Leu Phe Val Pro Arg Arg Ala Pro Phe Asp Leu Phe Glu Asn
 1 5 10 15
 Arg Lys Lys Lys Asn Asn Ile Lys Leu Tyr Val Arg Arg Val Phe Ile
 20 25 30
 Met Asp Asn Cys Glu Glu Leu Ile Pro Glu Tyr Leu Asn Phe Ile Arg
 35 40 45
 Gly Val Val Asp Ser Glu Asp Leu Pro Leu Asn Ile Ser Arg Glu Met
 50 55 60
 Leu Gln Gln Ser Lys Ile Leu Lys Val Ile Arg Lys Asn Leu Val Lys
 65 70 75 80
 Lys Cys Leu Glu Leu Phe Thr Glu Leu Ala Glu Asp Lys Glu Asn Tyr
 85 90 95
 Lys Lys Phe Tyr Glu Gln Phe Ser Lys Asn Ile Lys Leu Gly Ile His
 100 105 110
 Glu Asp Ser Gln Asn Arg Lys Lys Leu Ser Glu Leu Leu Arg Tyr Tyr
 115 120 125
 Thr Ser Ala Ser Gly Asp Glu Met Val Ser Leu Lys Asp Tyr Cys Thr
 130 135 140
 Arg Met Lys Glu Asn Gln Lys His Ile Tyr Tyr Ile Thr Gly Glu Thr

145					150					155				160	
Lys	Asp	Gln	Val	Ala	Asn	Ser	Ala	Phe	Val	Glu	Arg	Leu	Arg	Lys	His
				165					170					175	
Gly	Leu	Glu	Val	Ile	Tyr	Met	Ile	Glu	Pro	Ile	Asp	Glu	Tyr	Cys	Val
			180					185					190		
Gln	Gln	Leu	Lys	Glu	Phe	Glu	Gly	Lys	Thr	Leu	Val	Ser	Val	Thr	Lys
		195					200					205			
Glu	Gly	Leu	Glu	Leu	Ser	Glu	Asp	Glu	Glu	Glu					
	210					215									

<210> 206
 <211> 187
 <212> PRT
 <213> Bovine

<400> 206															
Gly	Asn	Pro	Arg	Thr	Asn	Gly	Met	Cys	Ser	Val	Cys	Tyr	Lys	Glu	His
1				5					10					15	
Leu	Gln	Arg	Gln	Asn	Ser	Ser	Asn	Gly	Arg	Ile	Ser	Pro	Pro	Ala	Pro
			20					25					30		
Ser	Val	Thr	Ser	Leu	Ser	Glu	Ser	Leu	Pro	Val	Gln	Cys	Thr	Asp	Gly
		35					40					45			
Ser	Val	Pro	Glu	Ala	Gln	Ser	Ala	Leu	Asp	Ser	Thr	Ala	Ser	Ser	Val
	50					55					60				
Gln	Pro	Ser	Pro	Val	Ser	Asn	Gln	Ser	Leu	Leu	Ser	Glu	Ser	Val	Ala
65					70					75					80
Ser	Ser	Gln	Val	Asp	Ser	Thr	Ser	Val	Asp	Lys	Ala	Ile	Pro	Glu	Thr
			85					90					95		
Glu	Asp	Leu	Gln	Ala	Ser	Val	Ser	Glu	Thr	Ala	Gln	Gln	Ala	Ser	Glu
			100					105					110		
Glu	Gln	Ser	Lys	Ser	Leu	Glu	Lys	Pro	Lys	Gln	Lys	Lys	Asn	Arg	Cys
	115						120					125			
Phe	Met	Cys	Arg	Lys	Lys	Val	Gly	Leu	Thr	Gly	Phe	Glu	Cys	Arg	Cys
	130					135					140				
Gly	Asn	Val	Tyr	Cys	Gly	Val	His	Arg	Tyr	Ser	Asp	Val	His	Asn	Cys
145					150					155					160
Ser	Tyr	Asn	Tyr	Lys	Ala	Asp	Ala	Ala	Glu	Lys	Ile	Arg	Lys	Glu	Asn
				165					170					175	
Pro	Val	Val	Val	Gly	Glu	Lys	Ile	Gln	Lys	Ile					
			180					185							

<210> 207
 <211> 70
 <212> PRT
 <213> Bovine

<220>
 <221> VARIANT
 <222> (1)...(70)
 <223> Xaa = Any Amino Acid

<400> 207															
Asn	Ile	Pro	Ala	Gly	Thr	Thr	Val	Asp	Thr	Lys	Ile	Thr	His	Pro	Thr
1				5					10					15	
Glu	Phe	Asp	Phe	Tyr	Leu	Cys	Ser	His	Ala	Gly	Ile	Gln	Gly	Thr	Ser
			20					25					30		
Arg	Pro	Ser	His	Tyr	His	Val	Leu	Trp	Asp	Asp	Asn	Arg	Phe	Ser	Ser

	35		40		45										
Asp	Glu	Leu	Gln	Ile	Leu	Thr	Tyr	Gln	Leu	Xaa	His	Thr	Tyr	Val	Arg
	50					55					60				
Cys	Thr	Arg	Ser	Val	Val										
65					70										

<210> 208
 <211> 60
 <212> PRT
 <213> Bovine

<220>
 <221> VARIANT
 <222> (1)...(60)
 <223> Xaa = Any Amino Acid

<400> 208															
Ala	Leu	Leu	Asp	Val	Gln	Phe	Arg	Asn	Thr	Thr	Ile	Gly	Leu	Thr	Val
1				5					10					15	
Phe	Ala	Ile	Lys	Lys	Tyr	Val	Val	Phe	Leu	Arg	Leu	Phe	Leu	Glu	Thr
			20					25					30		
Ala	Glu	Lys	Tyr	Phe	Met	Xaa	Gly	His	Lys	Val	Ile	Tyr	Tyr	Val	Phe
	35						40					45			
Thr	Asp	Arg	Pro	Ala	Asp	Val	Pro	Gln	Ile	Ala	Leu				
	50					55					60				

<210> 209
 <211> 124
 <212> PRT
 <213> Bovine

<400> 209															
Met	Ala	Asp	Asp	Leu	Lys	Arg	Phe	Leu	Tyr	Lys	Lys	Leu	Pro	Ser	Val
1				5				10					15		
Glu	Gly	Leu	His	Ala	Ile	Val	Val	Ser	Asp	Arg	Asp	Gly	Val	Pro	Val
			20					25					30		
Ile	Lys	Val	Ala	Asn	Asp	Asn	Ala	Pro	Glu	His	Ala	Leu	Arg	Pro	Gly
	35					40						45			
Phe	Leu	Ser	Thr	Phe	Ala	Leu	Ala	Thr	Asp	Gln	Gly	Ser	Lys	Leu	Gly
	50					55					60				
Leu	Ser	Lys	Asn	Lys	Ser	Ile	Ile	Cys	Tyr	Tyr	Asn	Thr	Tyr	Gln	Val
65				70				75						80	
Val	Gln	Phe	Asn	Arg	Leu	Pro	Leu	Val	Val	Ser	Phe	Ile	Ala	Ser	Ser
			85					90					95		
Asn	Ala	Asn	Thr	Gly	Leu	Ile	Val	Ser	Leu	Glu	Lys	Glu	Leu	Ala	Pro
		100					105					110			
Leu	Phe	Glu	Glu	Leu	Arg	Gln	Val	Val	Glu	Val	Ser				
	115					120									

<210> 210
 <211> 107
 <212> PRT
 <213> Bovine

<400> 210															
Asp	Phe	Gly	Thr	Met	Lys	Asp	Lys	Ile	Ala	Ala	Asn	Glu	Tyr	Lys	Ser
1				5				10					15		

Val	Thr	Glu	Phe	Lys	Ala	Asp	Phe	Lys	Leu	Met	Cys	Asp	Asn	Ala	Met
		20						25					30		
Thr	Tyr	Asn	Arg	Pro	Asp	Thr	Val	Tyr	Tyr	Lys	Leu	Ala	Lys	Lys	Ile
		35					40					45			
Leu	His	Ala	Gly	Phe	Lys	Met	Met	Ser	Lys	Glu	Arg	Leu	Leu	Ala	Leu
	50					55					60				
Lys	Arg	Ser	Met	Ser	Phe	Met	Gln	Asp	Met	Asp	Phe	Ser	Gln	Gln	Ala
65					70					75					80
Ala	Leu	Leu	Gly	Asn	Glu	Asp	Thr	Ala	Ala	Glu	Glu	Pro	Val	Pro	Glu
			85					90					95		
Val	Val	Pro	Val	His	Val	Glu	Thr	Ala	Lys	Lys					
			100					105							

<210> 211
 <211> 150
 <212> PRT
 <213> Bovine

Gln	Asp	Leu	Asn	Ser	Thr	Ala	Ala	Pro	His	Pro	Arg	Leu	Ser	Gln	Tyr
1			5					10						15	
Lys	Ser	Lys	Tyr	Ser	Ser	Leu	Glu	Gln	Ser	Glu	Arg	Arg	Arg	Gln	Leu
		20						25				30			
Leu	Glu	Leu	Gln	Lys	Leu	Lys	Arg	Leu	Asp	Tyr	Val	Asn	His	Ala	Arg
	35						40					45			
Arg	Leu	Ala	Glu	Asp	Asp	Trp	Thr	Gly	Met	Glu	Ser	Glu	Glu	Glu	Glu
	50					55				60					
Glu	Lys	Lys	Asp	Asp	Glu	Glu	Met	Asp	Val	Asp	Thr	Gly	Lys	Glu	Leu
65					70					75					80
Pro	Lys	Arg	Tyr	Ala	Asn	Gln	Leu	Met	Leu	Ser	Glu	Trp	Leu	Ile	Asp
			85					90					95		
Val	Pro	Ser	Asp	Leu	Gly	Gln	Glu	Trp	Ile	Val	Val	Val	Cys	Pro	Val
			100					105					110		
Gly	Lys	Arg	Ser	Leu	Ile	Val	Ala	Ser	Gln	Gly	Leu	Thr	Ser	Ala	Tyr
		115					120					125			
Thr	Arg	Ser	Gly	Tyr	Trp	Val	Asn	Thr	Phe	Pro	Ser	Leu	Leu	Pro	Gly
	130					135						140			
Gly	Asn	Arg	Arg	Asn	Ser										
145					150										

<210> 212
 <211> 124
 <212> PRT
 <213> Bovine

Ile	Gln	Glu	Leu	Arg	Arg	Gly	Ser	Gln	Ala	Ala	Asn	Ile	Tyr	Cys	Ile
1			5					10						15	
Asn	Phe	Asn	Gln	Asp	Ala	Ser	Leu	Ile	Cys	Val	Ser	Ser	Asp	His	Gly
		20						25					30		
Thr	Val	His	Ile	Phe	Ala	Ala	Glu	Asp	Pro	Lys	Arg	Asn	Lys	Gln	Ser
	35						40					45			
Ser	Leu	Ala	Ser	Ala	Ser	Phe	Leu	Pro	Lys	Tyr	Phe	Ser	Ser	Lys	Trp
	50					55					60				
Ser	Phe	Ser	Lys	Phe	Gln	Val	Pro	Ser	Gly	Ser	Pro	Cys	Ile	Cys	Ala
65					70					75					80
Phe	Gly	Thr	Glu	Pro	Asn	Ala	Val	Ile	Ala	Ile	Cys	Ala	Asp	Gly	Ser

				85					90				95			
Tyr	Tyr	Lys	Phe	Leu	Phe	Asn	Pro	Lys	Gly	Glu	Cys	Val	Arg	Asp	Val	
			100					105					110			
Tyr	Ala	Gln	Phe	Leu	Glu	Met	Thr	Asp	Asp	Lys	Leu					
		115					120									

<210> 213
 <211> 75
 <212> PRT
 <213> Bovine

<400> 213

Asp	Cys	Gly	Leu	Asp	Ser	Cys	Tyr	Asn	Ser	Ser	Gly	Ala	Leu	Gln	Phe	
1			5					10					15			
Leu	Gln	Lys	Asn	Ser	Ser	Lys	Tyr	His	Phe	Arg	Arg	Thr	Lys	Met	Leu	
			20				25					30				
Pro	Val	Ser	Gly	Gly	Phe	His	Thr	Arg	Leu	Met	Glu	Pro	Ala	Val	Glu	
		35				40					45					
Pro	Leu	Val	Gln	Val	Leu	Lys	Ala	Ile	Asp	Val	Lys	Lys	Pro	Leu	Val	
	50					55				60						
Ser	Val	His	Ser	Asn	Val	Asp	Gly	Asn	Lys	Tyr						
65				70					75							

<210> 214
 <211> 108
 <212> PRT
 <213> Bovine

<400> 214

Cys	Asp	Val	Pro	Ala	Lys	Ala	Ile	Ala	Ser	Ala	Leu	His	Gly	Leu	Cys	
1			5					10				15				
Ala	Gln	Ile	Leu	Ser	Glu	Arg	Val	Glu	Val	Ser	Gly	Asp	Ser	Pro	Cys	
			20				25				30					
Cys	Ser	Leu	Asp	Pro	Ile	Thr	Pro	Glu	Asp	Leu	Pro	Arg	Gln	Val	Glu	
		35				40					45					
Leu	Leu	Asp	Ala	Val	Ser	Gln	Ala	Ala	Gln	Lys	Tyr	Glu	Ala	Leu	Tyr	
	50					55				60						
Met	Gly	Thr	Leu	Pro	Val	Thr	Lys	Ala	Met	Gly	Met	Asp	Val	Leu	Asn	
65				70					75					80		
Glu	Ala	Ile	Gly	Arg	Gly	Trp	Cys	Arg	Gly	Gly	Thr	Thr	Val	Ala	Val	
			85					90					95			
Ser	Cys	Ala	Pro	Arg	Asp	Leu	Tyr	Trp	Cys	Trp	Ser					
		100					105									

<210> 215
 <211> 67
 <212> PRT
 <213> Bovine

<400> 215

Met	Gly	Val	Glu	Gly	Cys	Thr	Lys	Cys	Ile	Lys	Tyr	Leu	Leu	Phe	Val	
1			5					10				15				
Phe	Asn	Phe	Val	Phe	Trp	Leu	Ala	Gly	Gly	Val	Ile	Leu	Gly	Val	Ala	
			20				25					30				
Leu	Trp	Leu	Arg	His	Asp	Pro	Gln	Thr	Thr	Asn	Leu	Leu	Tyr	Leu	Glu	
		35				40					45					
Leu	Gly	Asp	Arg	Pro	Ala	Pro	Asn	Thr	Phe	Tyr	Val	Gly	Ile	Tyr	Ile	

50 55 60
 Leu Ile Ala
 65
 <210> 216
 <211> 76
 <212> PRT
 <213> Bovine
 <400> 216
 Ile Phe Leu Gly Ser Lys Ile Thr Ala Asp Gly Asp Cys Ser His Glu
 1 5 10 15
 Ile Glu Arg Cys Phe Leu Leu Gly Arg Lys Leu Met Thr Asn Leu Asp
 20 25 30
 Ser Ile Leu Lys Ser Arg Asp Ile Thr Leu Pro Thr Lys Val His Pro
 35 40 45
 Val Glu Ala Met Val Phe Pro Val Val Met Tyr Gly Cys Glu Ser Trp
 50 55 60
 Thr Ile Lys Lys Ala Glu Tyr Arg Arg Ile Asp Ser
 65 70 75

<210> 217
 <211> 159
 <212> PRT
 <213> Bovine
 <400> 217
 Asp Val Pro His Pro Pro Leu Lys Ile Pro Gly Gly Arg Gly Asn Ser
 1 5 10 15
 Gln Arg Asp His Asn Leu Ser Ala Asn Leu Phe Tyr Ser Asp Asn Arg
 20 25 30
 Leu Asn Val Thr Glu Glu Leu Thr Ser Asn Asn Lys Thr Arg Ile Phe
 35 40 45
 Asn Val Gln Ser Arg Leu Thr Glu Ala Lys His Ile Asn Trp Arg Ala
 50 55 60
 Val Leu Ser Asn Ser Cys Leu Tyr Val Glu Ile Pro Gly Gly Ala Leu
 65 70 75 80
 Pro Glu Gly Ser Lys Asp Ser Phe Ala Val Leu Leu Glu Phe Ala Glu
 85 90 95
 Glu Gln Leu His Val Asp His Val Phe Ile Cys Phe His Lys Asn Arg
 100 105 110
 Asp Asp Arg Ala Ala Leu Leu Arg Thr Phe Ser Phe Leu Gly Phe Glu
 115 120 125
 Ile Val Arg Pro Gly His Pro Leu Val Pro Lys Arg Pro Asp Ala Cys
 130 135 140
 Phe Met Ala Tyr Thr Phe Glu Arg Glu Ser Ser Gly Glu Glu Glu
 145 150 155

<210> 218
 <211> 117
 <212> PRT
 <213> Bovine
 <400> 218
 Arg Lys Arg Arg Ser Asp Pro Asn Phe Lys Asn Arg Leu Arg Glu Arg
 1 5 10 15
 Arg Lys Lys Gln Lys Leu Ala Lys Glu Arg Ala Gly Leu Ser Lys Leu

Gln Leu Trp Asp Thr Ala Arg Ala Thr Gly Pro Leu Gln Val Phe Lys
85 90 95
Glu His Thr Gln Glu Val Tyr Ser Val Asp Trp Ser Gln Thr Arg Gly
100 105 110
Glu Gln Leu Val Val Ser Gly Ser Trp Asp Gln Thr Val Lys Leu
115 120 125

<210> 221
<211> 100
<212> PRT
<213> Bovine

<400> 221
Met Asp Glu Ser Ala Leu Thr Leu Gly Thr Ile Asp Val Ser Tyr Leu
1 5 10 15
Pro Asn Ser Ser Glu Tyr Ser Ile Gly Arg Cys Lys His Ala Thr Glu
20 25 30
Glu Trp Gly Glu Cys Gly Ser Arg Pro Thr Val Phe Arg Ser Ala Thr
35 40 45
Leu Lys Trp Lys Glu Ser Leu Met Ser Arg Lys Arg Pro Phe Val Gly
50 55 60
Arg Cys Cys Tyr Ser Cys Thr Pro Gln Ser Trp Asp Lys Phe Phe Asn
65 70 75 80
Pro Ser Ile Pro Ser Leu Gly Leu Arg Asn Val Ile Tyr Ile Asn Glu
85 90 95
Thr His Thr Arg
100

<210> 222
<211> 200
<212> PRT
<213> Bovine

<400> 222
Met Ala Asn Gly Tyr Thr Tyr Glu Asp Tyr Gln Asp Thr Ala Lys Trp
1 5 10 15
Leu Leu Ser His Thr Glu Gln Arg Pro Gln Val Ala Val Ile Cys Gly
20 25 30
Ser Gly Leu Gly Gly Leu Val Asn Lys Leu Thr Gln Ala Gln Thr Phe
35 40 45
Asp Tyr Ser Glu Ile Pro Asn Phe Pro Glu Ser Thr Val Pro Gly His
50 55 60
Ala Gly Arg Leu Val Phe Gly Ile Leu Asn Gly Arg Ala Cys Val Met
65 70 75 80
Met Gln Gly Arg Phe His Met Tyr Glu Gly Tyr Pro Phe Trp Lys Val
85 90 95
Thr Phe Pro Val Arg Val Phe Arg Leu Leu Gly Val Glu Thr Leu Val
100 105 110
Val Thr Asn Ala Ala Gly Gly Leu Asn Pro Asn Phe Glu Val Gly Asp
115 120 125
Ile Met Leu Ile Arg Asp His Ile Asn Leu Pro Gly Phe Ser Gly Glu
130 135 140
Asn Pro Leu Arg Gly Pro Asn Glu Glu Arg Phe Gly Val Arg Phe Pro
145 150 155 160
Ala Met Ser Asp Ala Tyr Asp Arg Asp Met Arg Gln Lys Ala His Ser
165 170 175
Thr Trp Lys Gln Met Gly Glu Gln Arg Glu Leu Gln Glu Gly Thr Tyr

	180		185		190
Val	Met	Leu	Gly	Gly	Pro
			Asn	Phe	
	195			200	

<210> 223
 <211> 157
 <212> PRT
 <213> Bovine

<400> 223

Gln	Ser	Glu	Pro	Leu	Thr	Gly	Val	Phe	Thr	Thr	Glu	Glu	Val	Pro	Ala
1				5					10					15	
Gln	Gln	Tyr	Leu	Glu	Ile	Asp	Glu	Val	Thr	Pro	Asp	Ser	Phe	Arg	Val
			20					25					30		
Ser	Trp	His	Pro	Leu	Ser	Ala	Asp	Glu	Gly	Gln	His	Lys	Leu	Met	Trp
		35					40					45			
Ile	Pro	Val	Tyr	Gly	Gly	Ser	Thr	Glu	Glu	Val	Val	Leu	Gln	Glu	Asp
	50					55					60				
Gln	Asp	Ser	Tyr	Val	Ile	Glu	Gly	Leu	Glu	Pro	Gly	Thr	Glu	Tyr	Glu
65					70					75					80
Val	Ser	Leu	Leu	Ala	Val	Leu	Asp	Asp	Gly	Ser	Glu	Ser	Glu	Val	Val
				85					90					95	
Thr	Ala	Val	Gly	Thr	Thr	Leu	Asp	Ser	Phe	Trp	Thr	Glu	Pro	Pro	Thr
			100						105				110		
Thr	Glu	Glu	Ala	Pro	Thr	Arg	Pro	Val	Thr	Ser	Val	Phe	Arg	Thr	Gly
		115					120					125			
Ile	Arg	Asn	Leu	Val	Val	Asp	Ala	Glu	Thr	Thr	Ser	Ser	Leu	Arg	Val
	130					135					140				
Ala	Trp	Asp	Ile	Ser	Asn	Ser	Ser	Val	Gln	Ala	Ile	Gln			
145					150					155					

<210> 224
 <211> 128
 <212> PRT
 <213> Bovine

<400> 224

Arg	Ser	Lys	Cys	Tyr	Thr	Phe	Lys	Gly	Pro	Gly	Asn	Arg	Pro	Leu	Pro
1				5					10					15	
Arg	Met	Glu	Gly	Arg	Asn	Phe	Ser	Pro	Val	Pro	Ser	Lys	Pro	Arg	Ser
			20					25					30		
Gln	Ser	Pro	Gly	Glu	Glu	Glu	Asn	Ser	Leu	Asn	Glu	Asp	Trp	Tyr	Val
		35					40					45			
Ser	Tyr	Val	Thr	Arg	Thr	Glu	Ala	Glu	Ala	Ala	Leu	Arg	Lys	Ile	Asn
	50					55					60				
Gln	Asp	Gly	Thr	Phe	Leu	Val	Arg	Asp	Ser	Ser	Lys	Lys	Thr	Ile	Ser
65					70					75					80
Asn	Pro	Tyr	Val	Leu	Met	Val	Leu	Tyr	Lys	Asp	Lys	Val	Tyr	Asn	Ile
				85					90					95	
Gln	Ile	Arg	Tyr	Gln	Glu	Glu	Ser	Gln	Val	Tyr	Leu	Leu	Gly	Thr	Gly
			100					105					110		
Leu	Arg	Gly	Lys	Glu	Asp	Phe	Leu	Ser	Val	Ser	Asp	Ile	Ile	Asp	Tyr
		115					120					125			

<210> 225
 <211> 187
 <212> PRT

<213> Bovine

<400> 225

Ala	Ser	Ala	Arg	Lys	Ala	Ala	Gln	Val	Thr	Ile	Gln	Ser	Ser	Gly	Thr
1				5					10					15	
Phe	Ser	Thr	Lys	Phe	Gln	Val	Glu	Asn	Ser	Asn	Arg	Leu	Leu	Leu	Gln
			20					25					30		
Gln	Val	Ser	Leu	Pro	Glu	Val	Pro	Gly	Glu	Tyr	Cys	Met	Ser	Val	Thr
		35					40					45			
Gly	Glu	Gly	Cys	Val	Tyr	Leu	Gln	Thr	Ser	Leu	Lys	Tyr	Asn	Ile	Leu
	50					55					60				
Pro	Lys	Lys	Asp	Glu	Phe	Pro	Phe	Ala	Leu	Glu	Val	Gln	Thr	Leu	Pro
65					70					75					80
Gln	Thr	Cys	Asp	Gly	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu
			85						90					95	
Ser	Val	Ser	Tyr	Ile	Gly	Ser	Arg	Pro	Ala	Ser	Asn	Met	Ala	Ile	Val
			100					105					110		
Asp	Val	Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys
		115					120					125			
Met	Leu	Glu	Arg	Ser	Asn	Val	Ser	Arg	Thr	Glu	Val	Ser	Asn	Asn	His
	130					135					140				
Val	Leu	Ile	Tyr	Leu	Asp	Lys	Val	Thr	Asn	Glu	Thr	Leu	Thr	Leu	Thr
145					150					155					160
Phe	Thr	Val	Leu	Gln	Asp	Ile	Pro	Val	Arg	Asp	Leu	Lys	Pro	Ala	Ile
				165					170						175
Val	Lys	Val	Tyr	Asp	Tyr	Tyr	Glu	Thr	Asp	Glu					
			180					185							

<210> 226

<211> 184

<212> PRT

<213> Bovine

<400> 226

Asp	His	Leu	Glu	Ala	Lys	Lys	Pro	Leu	Ser	Thr	Pro	Ser	Leu	Thr	Thr
1				5					10					15	
Glu	Asp	Trp	Leu	Val	Gln	Asn	His	Gln	Asp	Pro	Tyr	Lys	Val	Glu	Glu
			20					25					30		
Val	Cys	Lys	Ala	Asn	Glu	Pro	Cys	Thr	Ser	Phe	Ala	Glu	Cys	Val	Cys
		35					40					45			
Asp	Glu	Asn	Cys	Glu	Lys	Glu	Ala	Leu	Cys	Lys	Trp	Leu	Leu	Lys	Lys
	50					55					60				
Glu	Gly	Lys	Asp	Lys	Asn	Gly	Met	Pro	Val	Asp	Pro	Lys	Pro	Glu	Pro
65					70					75					80
Gly	Lys	His	Lys	Asp	Ser	Leu	Asn	Thr	Trp	Leu	Ser	Pro	Ser	Gly	Arg
			85					90						95	
Glu	Ala	Ala	Glu	Gln	Ala	Arg	Ala	Pro	Gln	Ala	Thr	Ala	Ala	Gly	Val
			100					105					110		
Ala	Asp	Ser	Phe	Gln	Val	Ile	Arg	Ser	Ser	Pro	Leu	Ser	Glu	Trp	Leu
		115					120					125			
Met	Thr	Pro	Ser	His	Lys	Glu	Gly	Cys	Pro	Asn	Lys	Glu	Ala	Pro	Leu
	130					135					140				
Thr	Glu	Asp	Arg	Ala	Ser	Lys	Gln	Lys	Leu	Thr	Ser	Pro	Leu	Ala	Thr
145					150					155					160
Ala	Trp	Cys	Pro	Phe	Asn	Thr	Ala	Asp	Trp	Val	Leu	Pro	Ala	Lys	Lys
			165					170						175	
Thr	Gly	Asn	Leu	Ser	Gln	Leu	Ser								

180

<210> 227
 <211> 161
 <212> PRT
 <213> Bovine

<400> 227
 Glu Ser Arg Ile Ser His Glu Asn Gly Thr Ile Leu Cys Ser Lys Gly
 1 5 10 15
 Ser Thr Cys Tyr Gly Leu Trp Glu Lys Ser Lys Gly Asp Ile Asn Leu
 20 25 30
 Val Lys Gln Gly Cys Trp Ser His Ile Gly Asp Pro Gln Glu Cys His
 35 40 45
 Tyr Glu Glu Cys Val Val Thr Thr Thr Pro Pro Ser Ile Gln Asn Gly
 50 55 60
 Thr Tyr Arg Phe Cys Cys Cys Ser Thr Asp Leu Cys Asn Val Asn Phe
 65 70 75 80
 Thr Glu Asn Phe Pro Pro Pro Asp Thr Thr Pro Leu Ser Pro Pro His
 85 90 95
 Ser Phe Asn Arg Asp Glu Thr Ile Ile Ile Ala Leu Ala Ser Val Ser
 100 105 110
 Val Leu Ala Val Leu Ile Val Ala Leu Cys Phe Gly Tyr Arg Met Leu
 115 120 125
 Thr Gly Asp Arg Lys Gln Gly Leu His Ser Met Asn Met Met Glu Ala
 130 135 140
 Ala Ala Ser Glu Pro Ser Leu Asp Leu Asn Asn Leu Lys Leu Leu Glu
 145 150 155 160
 Leu

<210> 228
 <211> 86
 <212> PRT
 <213> Bovine

<400> 228
 Glu Lys Arg Ala Tyr Leu Gln Ser Arg Phe Pro Gln Leu Asn Glu Thr
 1 5 10 15
 Ser Phe Ala Asn Ser Arg Asp Thr Ser Phe Glu Gln His Val Leu Trp
 20 25 30
 His Thr Ala Gly Lys Gly Ala Asp Leu Val Leu Asn Ser Leu Ala Glu
 35 40 45
 Glu Lys Leu Gln Ala Ser Val Arg Cys Leu Ala Gln His Gly Arg Phe
 50 55 60
 Leu Glu Ile Gly Lys Phe Asp Leu Ser Lys Asn His Pro Leu Gly Ala
 65 70 75 80
 Gly His Pro Pro Tyr Leu
 85

<210> 229
 <211> 75
 <212> PRT
 <213> Bovine

<400> 229
 Val Asn Ala Ala Gly Gly Pro Thr Pro Ser Gln Arg Gly Leu Ser Asp

1		5		10		15									
Leu	Ala	Leu	Cys	Gly	Pro	Ala	Ala	Asn	Gln	Cys	Ala	Gly	Pro	Ala	Lys
		20		25		30									
Asp	Arg	Val	Asp	Cys	Gly	Tyr	Pro	Glu	Val	Thr	Pro	Glu	Gln	Cys	Asn
		35		40		45									
Asn	Arg	Gly	Cys	Cys	Phe	Asp	Ser	Ser	Ile	His	Gly	Val	Pro	Trp	Cys
		50		55		60									
Phe	Lys	Pro	Leu	Gln	Glu	Ala	Glu	Cys	Thr	Phe					
65				70					75						

<210> 230
 <211> 77
 <212> PRT
 <213> Bovine

<400> 230
Ser Gly Pro Thr Ser Glu Lys Pro Ala Arg Ser His Pro Trp Thr Pro
1 5 10 15
Asp Asp Ser Thr Asp Thr Asn Gly Ser Asp Asn Ser Ile Pro Met Ala
20 25 30
Tyr Leu Thr Leu Asp His Gln Leu Gln Pro Leu Ala Pro Cys Pro Asn
35 40 45
Ser Lys Glu Ser Met Ala Val Phe Glu Gln His Cys Lys Met Ala Gln
50 55 60
Glu Tyr Met Lys Val Gln Thr Glu Ile Ala Leu Leu Leu
65 70 75

<210> 231
 <211> 112
 <212> PRT
 <213> Bovine

<400> 231
Pro Ile Ile Leu Val Gly Asn Lys Ser Asp Leu Val Arg Ser Arg Glu
1 5 10 15
Val Ser Leu Asp Glu Gly Arg Ala Cys Ala Val Val Phe Asp Cys Lys
20 25 30
Phe Ile Glu Thr Ser Ala Ala Leu His His Asn Val Gln Ala Leu Phe
35 40 45
Glu Gly Val Val Arg Gln Ile Arg Leu Arg Arg Asp Ser Lys Glu Ala
50 55 60
Asn Ala Arg Arg Gln Ala Gly Thr Arg Arg Arg Glu Ser Leu Gly Lys
65 70 75 80
Lys Ala Lys Arg Phe Leu Gly Arg Ile Val Ala Arg Asn Ser Arg Lys
85 90 95
Met Ala Met Arg Ala Lys Ser Lys Ser Cys His Asp Leu Ser Val Leu
100 105 110

<210> 232
 <211> 167
 <212> PRT
 <213> Bovine

<400> 232
Cys Phe Val Ala Ser Ile Leu Leu Leu Ala Val Ala Arg Cys Ile Leu
1 5 10 15
Phe Leu Ile Ile Trp Leu Ile Thr Gly Gly Arg His His Phe Trp Phe

Arg	Ala	Arg	Ala	Ala	Val	Asp	Thr	Tyr	Cys	Arg	His	Asn	Tyr	Gly	Gly
			85						90					95	
Val	Glu	Ser	Phe	Thr	Val	Gln	Arg	Arg	Val	Glu	Pro	Thr	Val	Thr	Val
			100					105					110		
Tyr	Pro	Ala	Lys	Thr	Gln	Pro	Leu	Gln	His	His	Asn	Leu	Leu		
		115					120					125			

<210> 235
 <211> 170
 <212> PRT
 <213> Bovine

His	Glu	Leu	Thr	Leu	Ala	Glu	Tyr	His	Glu	Gln	Glu	Glu	Ile	Phe	Lys
1				5					10					15	
Leu	Arg	Leu	Gly	His	Leu	Lys	Lys	Glu	Glu	Ala	Glu	Ile	Gln	Ala	Glu
			20					25					30		
Leu	Glu	Arg	Leu	Glu	Arg	Val	Arg	Asn	Leu	His	Ile	Arg	Glu	Leu	Lys
		35					40					45			
Arg	Ile	His	Asn	Glu	Asp	Asn	Ser	Gln	Phe	Lys	Asp	His	Pro	Thr	Leu
	50					55					60				
Asn	Asp	Arg	Tyr	Leu	Leu	Leu	His	Leu	Leu	Gly	Arg	Gly	Gly	Phe	Ser
65					70					75					80
Glu	Val	Tyr	Lys	Ala	Phe	Asp	Leu	Thr	Glu	Gln	Arg	Tyr	Val	Ala	Val
				85					90					95	
Lys	Ile	His	Gln	Leu	Asn	Lys	Asn	Trp	Arg	Asp	Glu	Lys	Lys	Glu	Asn
			100					105					110		
Tyr	His	Lys	His	Ala	Cys	Arg	Glu	Tyr	Arg	Ile	His	Lys	Glu	Leu	Asp
		115					120					125			
His	Pro	Arg	Ile	Val	Lys	Leu	Tyr	Asp	Tyr	Phe	Ser	Leu	Asp	Thr	Asp
	130					135					140				
Ser	Phe	Cys	Thr	Val	Leu	Glu	Tyr	Cys	Glu	Gly	Asn	Asp	Leu	Asp	Phe
145					150					155					160
Tyr	Leu	Lys	Gln	His	Lys	Leu	Met	Ser	Glu						
				165					170						

<210> 236
 <211> 228
 <212> PRT
 <213> Bovine

Met	Leu	Asp	Ser	Val	Thr	His	Ser	Thr	Phe	Leu	Pro	Asn	Thr	Ser	Phe
1				5					10					15	
Cys	Asp	Pro	Leu	Met	Ser	Trp	Thr	Asp	Leu	Phe	Ser	Asn	Glu	Glu	Tyr
			20					25					30		
Tyr	Pro	Ala	Phe	Glu	His	Gln	Thr	Ala	Cys	Asp	Ser	Tyr	Trp	Thr	Ser
		35					40					45			
Val	His	Pro	Glu	Tyr	Trp	Thr	Lys	Arg	His	Val	Trp	Glu	Trp	Leu	Gln
	50					55					60				
Phe	Cys	Cys	Asp	Gln	Tyr	Lys	Leu	Asp	Ala	Asn	Cys	Ile	Ser	Phe	Cys
65					70					75					80
His	Phe	Asn	Ile	Ser	Gly	Leu	Gln	Leu	Cys	Gly	Met	Thr	Gln	Glu	Glu
				85					90					95	
Phe	Met	Glu	Arg	Pro	Ala	Ser	Val	Gly	Ser	Ile	Cys	Thr	Leu	Ser	Ser
			100					105					110		
Arg	Ala	Ser	Ala	His	Lys	Val	Thr	Pro	Phe	Leu	Met	Ile	Leu	Met	Arg

	115		120		125										
Pro	Arg	Pro	Ser	Leu	Gln	Ser	Ser	His	Leu	Trp	Glu	Phe	Val	Arg	Asp
	130		135		140										
Leu	Leu	Leu	Ser	Pro	Glu	Glu	Asn	Cys	Gly	Ile	Leu	Glu	Trp	Glu	Ala
145			150		155				160						
Arg	Glu	Gln	Gly	Ile	Phe	Arg	Val	Val	Lys	Ser	Glu	Ala	Leu	Ala	Lys
			165		170				175						
Met	Trp	Gly	Gln	Arg	Lys	Lys	Asn	Asp	Arg	Met	Thr	Tyr	Glu	Lys	Leu
			180		185				190						
Ser	Arg	Ala	Leu	Arg	Tyr	Tyr	Tyr	Lys	Thr	Gly	Ile	Leu	Glu	Arg	Val
		195			200				205						
Asp	Arg	Arg	Leu	Val	Tyr	Lys	Phe	Gly	Lys	Asn	Ala	His	Gly	Trp	Gln
	210		215		220										
Glu	Asp	Lys	Leu												
225															

<210> 237
 <211> 120
 <212> PRT
 <213> Bovine

<400> 237

Asp	Thr	Lys	Gly	Phe	Cys	Ser	Ala	Asn	Leu	Leu	Glu	Asp	Leu	Pro	Leu
1			5					10					15		
Gln	Glu	Pro	Gln	Ser	Pro	His	Lys	Leu	Asn	Ala	Gly	Phe	Asp	Leu	Ala
			20				25					30			
Lys	Gly	Gly	Ala	Gly	Lys	Val	Asn	Leu	Pro	Lys	Glu	Leu	Ala	Ala	Asp
		35					40				45				
Ala	Val	Asn	Ile	Leu	Pro	Ala	Ser	Leu	Asp	Leu	Ser	Pro	Leu	Leu	Gly
	50				55					60					
Phe	Trp	Gln	Leu	Pro	Pro	Ala	Thr	Gln	Asn	Ala	Phe	Gly	Ser	Ser	Gly
65					70				75						80
Leu	Ala	Trp	Gly	Leu	Gly	Asn	Leu	Cys	Arg	Ile	Gly	Trp	Ala	Val	Trp
			85					90					95		
Gly	Ser	Lys	Pro	Gln	Asp	Pro	Ser	Leu	Ala	Met	Ser	Thr	Met	Ser	Leu
			100					105					110		
Gly	Gln	Leu	Pro	Leu	His	Pro	Ser								
		115					120								

<210> 238
 <211> 314
 <212> PRT
 <213> Bovine

<400> 238

Met	Thr	Glu	Gln	Met	Thr	Leu	Arg	Gly	Thr	Leu	Lys	Gly	His	Asn	Gly
1			5					10					15		
Trp	Val	Thr	Gln	Ile	Ala	Thr	Thr	Pro	Gln	Phe	Pro	Asp	Met	Ile	Leu
			20					25				30			
Ser	Ala	Ser	Arg	Asp	Lys	Thr	Ile	Ile	Met	Trp	Lys	Leu	Thr	Arg	Asp
		35					40				45				
Glu	Thr	Asn	Tyr	Gly	Ile	Pro	Gln	Arg	Ala	Leu	Arg	Gly	His	Ser	His
	50				55				60						
Phe	Val	Ser	Asp	Val	Val	Ile	Ser	Ser	Asp	Gly	Gln	Phe	Ala	Leu	Ser
65					70				75						80
Gly	Ser	Trp	Asp	Gly	Thr	Leu	Arg	Leu	Trp	Asp	Leu	Thr	Thr	Gly	Thr
			85					90						95	

Thr	Thr	Arg	Arg	Phe	Val	Gly	His	Thr	Lys	Asp	Val	Leu	Ser	Val	Ala	
			100					105					110			
Phe	Ser	Ser	Asp	Asn	Arg	Gln	Ile	Val	Ser	Gly	Ser	Arg	Asp	Lys	Thr	
		115					120					125				
Ile	Lys	Leu	Trp	Asn	Thr	Leu	Gly	Val	Cys	Lys	Tyr	Thr	Val	Gln	Asp	
	130					135					140					
Glu	Ser	His	Ser	Glu	Trp	Val	Ser	Cys	Val	Arg	Phe	Ser	Pro	Asn	Ser	
145				150						155					160	
Ser	Asn	Pro	Ile	Ile	Val	Ser	Cys	Gly	Trp	Asp	Lys	Leu	Val	Lys	Val	
			165					170						175		
Trp	Asn	Leu	Ala	Asn	Cys	Lys	Leu	Lys	Thr	Asn	His	Ile	Gly	His	Thr	
			180					185					190			
Gly	Tyr	Leu	Asn	Thr	Val	Thr	Val	Ser	Pro	Asp	Gly	Ser	Leu	Cys	Ala	
	195					200						205				
Ser	Gly	Gly	Lys	Asp	Gly	Gln	Ala	Met	Leu	Trp	Asp	Leu	Asn	Glu	Gly	
	210					215					220					
Lys	His	Leu	Tyr	Thr	Leu	Asp	Gly	Gly	Asp	Ile	Ile	Asn	Ala	Leu	Cys	
225					230					235					240	
Phe	Ser	Pro	Asn	Arg	Tyr	Trp	Leu	Cys	Ala	Ala	Thr	Gly	Pro	Ser	Ile	
			245						250					255		
Lys	Ile	Trp	Asp	Leu	Glu	Gly	Lys	Ile	Ile	Val	Asp	Glu	Leu	Lys	Gln	
			260					265					270			
Glu	Val	Ile	Ser	Thr	Ser	Ser	Lys	Ala	Glu	Pro	Pro	Gln	Cys	Thr	Ser	
		275					280					285				
Leu	Ala	Trp	Ser	Ala	Asp	Gly	Gln	Thr	Leu	Phe	Ala	Gly	Tyr	Thr	Asp	
	290					295					300					
Asn	Leu	Val	Arg	Val	Trp	Gln	Val	Pro	Ser							
305					310											

<210> 239
 <211> 116
 <212> PRT
 <213> Bovine

<400> 239																
Tyr	Tyr	Thr	Thr	Pro	Ile	Tyr	Arg	Phe	Arg	Met	Lys	Cys	His	Leu	Cys	
1				5					10					15		
Val	Asn	Tyr	Ile	Glu	Met	Gln	Thr	Asp	Pro	Ala	Asn	Cys	Asp	Tyr	Val	
		20						25					30			
Ile	Val	Ser	Gly	Ala	Gln	Arg	Lys	Glu	Glu	Arg	Trp	Asp	Met	Glu	Asp	
		35					40					45				
Asn	Glu	Gln	Val	Leu	Thr	Thr	Glu	His	Glu	Lys	Lys	Gln	Lys	Leu	Glu	
	50					55					60					
Met	Asp	Ala	Met	Phe	Arg	Leu	Glu	His	Gly	Glu	Ala	Asp	Arg	Ser	Thr	
65				70						75					80	
Leu	Lys	Lys	Ala	Leu	Pro	Thr	Leu	Ser	His	Ile	Gln	Glu	Ala	Gln	Ser	
			85						90					95		
Ala	Trp	Lys	Asp	Asp	Phe	Ala	Leu	Asn	Ser	Met	Leu	Arg	Lys	Arg	Phe	
			100					105					110			
Arg	Glu	Lys	Lys													
		115														

<210> 240
 <211> 166
 <212> PRT
 <213> Bovine

<400> 240

Leu	Thr	Gly	Pro	Gly	Arg	Thr	Glu	Val	Gly	Lys	Asn	Ser	Glu	Lys	Lys
1				5					10					15	
Val	Glu	Ser	Glu	Glu	Asn	Val	Asn	Gln	Asp	Arg	Asn	Gln	Asp	Asn	Glu
			20					25					30		
Asp	Ile	Gly	Asp	Ser	Lys	Asp	Ile	Arg	Leu	Thr	Leu	Met	Glu	Glu	Val
		35					40					45			
Leu	Leu	Leu	Gly	Leu	Lys	Asp	Lys	Glu	Gly	Tyr	Thr	Ser	Phe	Trp	Asn
	50					55					60				
Asp	Cys	Ile	Ser	Ser	Gly	Leu	Arg	Gly	Gly	Ile	Leu	Ile	Glu	Leu	Ala
65					70				75						80
Met	Arg	Gly	Arg	Ile	Tyr	Leu	Glu	Pro	Pro	Thr	Met	Arg	Lys	Lys	Arg
				85					90					95	
Leu	Leu	Asp	Arg	Lys	Val	Leu	Leu	Lys	Ser	Asp	Ser	Pro	Thr	Gly	Asp
			100					105					110		
Val	Leu	Leu	Asp	Glu	Thr	Leu	Lys	His	Ile	Lys	Ala	Ile	Glu	Pro	Thr
		115					120						125		
Glu	Thr	Val	Gln	Thr	Trp	Ile	Glu	Leu	Leu	Thr	Gly	Glu	Thr	Trp	Asn
	130					135					140				
Pro	Phe	Lys	Leu	Gln	Tyr	Gln	Leu	Arg	Asn	Val	Arg	Lys	Arg	Ile	Ala
145					150					155					160
Lys	Pro	Ser	Arg	Glu	Gly										
				165											

<210> 241
<211> 148
<212> PRT
<213> Bovine

<400> 241

Met	Glu	Lys	His	Leu	Phe	Asn	Leu	Lys	Phe	Ala	Ala	Lys	Glu	Leu	Gly
1				5					10					15	
Arg	Ser	Ala	Lys	Lys	Cys	Asp	Lys	Glu	Glu	Lys	Ala	Glu	Lys	Ala	Lys
			20					25					30		
Ile	Lys	Lys	Ala	Ile	Gln	Lys	Gly	Asn	Met	Glu	Val	Ala	Arg	Ile	His
		35					40					45			
Ala	Glu	Asn	Ala	Ile	Arg	Gln	Lys	Asn	Gln	Ala	Val	Asn	Phe	Leu	Arg
	50					55					60				
Met	Ser	Ala	Arg	Val	Asp	Ala	Val	Ala	Ala	Arg	Val	Gln	Thr	Ala	Val
65					70				75						80
Thr	Met	Gly	Lys	Val	Thr	Lys	Ser	Met	Ala	Gly	Val	Val	Lys	Ser	Met
				85					90					95	
Asp	Ala	Thr	Leu	Lys	Thr	Met	Asn	Leu	Glu	Lys	Ile	Ser	Ala	Leu	Met
			100					105					110		
Asp	Lys	Phe	Glu	His	Gln	Phe	Glu	Thr	Leu	Asp	Val	Gln	Thr	Gln	Gln
		115					120					125			
Met	Glu	Asp	Thr	Met	Ser	Ser	Thr	Thr	Thr	Leu	Thr	Thr	Pro	Gln	Gly
	130					135					140				
Gln	Val	Asp	Met												
145															

<210> 242
<211> 49
<212> PRT
<213> Bovine

<400> 242

Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Gly	Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala
1				5					10					15	
Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met	Val	Met	Ala	Asn	Asn	Val	Tyr	Lys
			20					25					30		
Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr	Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys
		35					40					45			
Leu															

<210> 243
 <211> 98
 <212> PRT
 <213> Bovine

Met	Val	Lys	Val	Thr	Phe	Asn	Ser	Ala	Leu	Ala	Gln	Lys	Glu	Ala	Lys
1				5					10					15	
Lys	Asp	Glu	Ser	Lys	Ser	Gly	Glu	Glu	Ala	Leu	Ile	Ile	Pro	Pro	Asp
			20					25					30		
Ala	Val	Ala	Val	Asp	Cys	Lys	Asp	Pro	Asp	Glu	Val	Val	Pro	Val	Gly
		35					40					45			
Gln	Arg	Arg	Ala	Trp	Cys	Trp	Cys	Met	Cys	Phe	Gly	Leu	Ala	Phe	Met
	50					55					60				
Leu	Ala	Gly	Val	Ile	Leu	Gly	Gly	Ala	Tyr	Leu	Tyr	Lys	Tyr	Phe	Ala
65				70					75					80	
Phe	Gln	Pro	Asp	Asp	Val	Tyr	Tyr	Cys	Gly	Ile	Lys	Tyr	Ile	Lys	Asp
				85					90					95	
Asp	Val														

<210> 244
 <211> 352
 <212> PRT
 <213> Bovine

Glu	Gln	Asn	Lys	Leu	Leu	Glu	Thr	Lys	Trp	Ala	Leu	Leu	Gln	Glu	Gln
1				5					10					15	
Lys	Ser	Ala	Lys	Ser	Asn	Arg	Leu	Pro	Gly	Ile	Phe	Glu	Ala	Gln	Ile
			20					25					30		
Ala	Gly	Leu	Arg	Lys	Gln	Leu	Glu	Ala	Leu	Gln	Leu	Asp	Gly	Gly	Arg
		35					40					45			
Leu	Glu	Val	Glu	Leu	Arg	Asn	Met	Gln	Asp	Val	Val	Glu	Asp	Phe	Lys
	50					55					60				
Asn	Lys	Tyr	Glu	Asp	Glu	Ile	Asn	His	Arg	Thr	Ala	Ala	Glu	Asn	Glu
65				70					75					80	
Phe	Val	Val	Leu	Lys	Lys	Asp	Val	Asp	Val	Ala	Tyr	Met	Asn	Lys	Val
				85					90					95	
Glu	Leu	Glu	Ala	Lys	Val	Asp	Thr	Leu	Asn	Asp	Glu	Ile	Asn	Phe	Leu
			100					105					110		
Arg	Thr	Leu	Tyr	Glu	Gln	Glu	Leu	Lys	Glu	Leu	Gln	Ser	Glu	Val	Ser
		115					120					125			
Asp	Thr	Ser	Val	Val	Leu	Ser	Met	Asp	Asn	Asn	Arg	Ser	Leu	Asp	Leu
	130					135					140				
Asp	Ser	Ile	Ile	Ala	Glu	Val	Lys	Ala	Gln	Tyr	Glu	Glu	Ile	Ala	Asn
145				150					155					160	
Arg	Ser	Arg	Ala	Glu	Ala	Glu	Ala	Cys	Tyr	Gln	Thr	Lys	Phe	Glu	Thr

				165					170					175			
Leu	Gln	Ala	Gln	Ala	Gly	Lys	His	Gly	Asp	Asp	Leu	Arg	Asn	Thr	Arg		
				180					185					190			
Asn	Glu	Ile	Ala	Asp	Met	Asn	Arg	Ala	Val	Gln	Arg	Leu	Gln	Ala	Glu		
				195					200					205			
Ile	Asp	Ser	Val	Lys	Asn	Gln	Arg	Ser	Lys	Leu	Glu	Ala	Ala	Ile	Ala		
				210					215					220			
Asp	Ala	Glu	Gln	Arg	Gly	Glu	Leu	Ala	Val	Lys	Asp	Ala	Arg	Ala	Lys		
225						230					235				240		
Gln	Glu	Asp	Leu	Glu	Ala	Ala	Leu	Gln	Lys	Ala	Lys	Gln	Asp	Met	Thr		
				245					250					255			
Arg	Gln	Leu	Arg	Glu	Tyr	Gln	Glu	Leu	Met	Asn	Val	Lys	Leu	Ala	Leu		
				260					265					270			
Asp	Ile	Glu	Ile	Ala	Thr	Tyr	Arg	Lys	Leu	Leu	Glu	Gly	Glu	Glu	Ser		
				275					280					285			
Arg	Leu	Thr	Gly	Asp	Gly	Val	Gly	Ala	Val	Asn	Ile	Ser	Val	Val	Ser		
				290					295					300			
Ser	Thr	Gly	Gly	Ser	Gly	Ser	Leu	Leu	Thr	Phe	Gly	Gly	Thr	Met	Gly		
305						310					315				320		
Asn	Asn	Ala	Leu	Arg	Phe	Ser	Ser	Gly	Gly	Gly	Pro	Gly	Thr	Leu	Lys		
				325					330					335			
Ala	Tyr	Ser	Met	Arg	Thr	Thr	Ser	Ala	Thr	Ser	Arg	Ser	Pro	Arg	Lys		
				340					345					350			

<210> 245
 <211> 99
 <212> PRT
 <213> Bovine

<400> 245

Arg	Val	Leu	Gly	Glu	Arg	Gln	Arg	Lys	Glu	Glu	Glu	Met	Lys	Gln	Leu
1				5					10					15	
Phe	Val	Gln	Arg	Val	Lys	Glu	Lys	Glu	Ala	Ile	Leu	Lys	Glu	Ala	Glu
			20					25					30		
Arg	Glu	Leu	Gln	Ala	Lys	Phe	Glu	His	Leu	Lys	Arg	Val	His	Gln	Glu
			35				40					45			
Glu	Lys	Leu	Arg	Leu	Glu	Glu	Lys	Arg	Arg	Leu	Leu	Glu	Glu	Glu	Ile
			50			55					60				
Met	Ala	Phe	Ser	Lys	Lys	Lys	Ala	Thr	Ser	Glu	Ile	Tyr	Gln	Asn	Gln
65				70						75				80	
Thr	Phe	Met	Thr	Pro	Gly	Ser	Asn	Leu	Arg	Lys	Asp	Lys	Asp	Arg	Lys
				85					90					95	
Asn	Ser	Asn													

<210> 246
 <211> 58
 <212> PRT
 <213> Bovine

<400> 246

Phe	Val	Ser	Pro	Glu	His	Val	Lys	His	Cys	Phe	Trp	Leu	Thr	Gln	Glu
1				5					10					15	
Phe	Arg	Tyr	Leu	Ser	Gln	Thr	His	Thr	Asn	His	Glu	Asp	Lys	Leu	Gln
			20					25					30		
Val	Lys	Asn	Val	Ile	Tyr	His	Ala	Val	Lys	Asp	Ala	Val	Ala	Met	Leu
			35				40					45			

Lys Ala Ser Glu Ser Ser Phe Gly Lys Pro
 50 55

<210> 247
 <211> 91
 <212> PRT
 <213> Bovine

<400> 247

Lys His Leu Asp Val Asp Leu Asp Arg Gln Ser Leu Ser Ser Ile Asp
 1 5 10 15
 Lys Asn Ala Ser Glu Arg Gly Gln Ser Gln Leu Ser Asn Pro Thr Asp
 20 25 30
 Asp Gly Trp Lys Ala Arg Pro Tyr Ala Asn Gln Lys Leu Phe Ala Ser
 35 40 45
 Leu Leu Ile Lys Cys Val Val Gln Leu Glu Leu Ile Gln Thr Ile Asp
 50 55 60
 Asn Ile Val Phe Tyr Pro Ala Thr Ser Lys Arg Glu Asp Ala Glu His
 65 70 75 80
 Met Ala Ala Met Pro Gln Pro Val Pro Thr Ala
 85 90

<210> 248
 <211> 86
 <212> PRT
 <213> Bovine

<400> 248

Arg Glu Tyr His Ile Thr Val Asp Glu Pro Arg Leu Lys Gln Pro Pro
 1 5 10 15
 Ser Gly Phe Asp Ser Val Ile Ala Arg Gly His Thr Glu Pro Asp Pro
 20 25 30
 Thr Arg Asp Thr Glu Leu Glu Leu Asp Gly Gln Arg Val Val Val Pro
 35 40 45
 Gln Gly Gln Pro Val Leu Cys Pro Asp Phe Arg Ser Cys Asn Phe Ser
 50 55 60
 Gln Ser Glu Tyr Leu Ile Tyr Gln Glu Ser Gln Arg Cys Leu Arg Tyr
 65 70 75 80
 Leu Leu Glu Ile His Leu
 85

<210> 249
 <211> 138
 <212> PRT
 <213> Bovine

<400> 249

Leu Ser Lys Ile Ser His Ala Lys Pro Ala Ile Ala Asp Tyr Ala Phe
 1 5 10 15
 Thr Thr Ile Lys Pro Glu Leu Gly Lys Ile Met Tyr Ser Asp Phe Lys
 20 25 30
 Gln Ile Ser Val Ala Asp Leu Pro Gly Leu Ile Glu Gly Ala His Met
 35 40 45
 Asn Lys Gly Met Gly His Lys Phe Leu Lys His Ile Glu Arg Thr Lys
 50 55 60
 Gln Leu Leu Phe Val Val Asp Ile Ser Gly Phe Gln Leu Ser Ser Gln
 65 70 75 80

Thr	His	Tyr	Arg	Thr	Ala	Phe	Glu	Thr	Ile	Ile	Leu	Leu	Ser	Lys	Glu
				85					90					95	
Leu	Glu	Leu	Tyr	Lys	Glu	Glu	Leu	His	Thr	Lys	Pro	Ala	Leu	Leu	Ala
			100					105					110		
Val	Asn	Lys	Met	Asp	Leu	Pro	Asp	Ala	Gln	Gly	Lys	Phe	His	Val	Leu
		115					120					125			
Met	Asn	Gln	Leu	Gln	Asn	Ser	Lys	Glu	Phe						
	130					135									

<210> 250
 <211> 85
 <212> PRT
 <213> Bovine

Lys	Pro	Trp	Asp	Asp	Glu	Thr	Asp	Met	Ala	Lys	Leu	Glu	Glu	Cys	Val
1				5					10					15	
Arg	Ser	Ile	Gln	Ala	Asp	Gly	Leu	Val	Trp	Gly	Ser	Ser	Lys	Leu	Val
			20					25					30		
Pro	Val	Gly	Tyr	Gly	Ile	Lys	Lys	Leu	Gln	Ile	Gln	Cys	Val	Val	Glu
		35					40					45			
Asp	Asp	Lys	Val	Gly	Thr	Asp	Met	Leu	Glu	Glu	Gln	Ile	Thr	Ala	Phe
	50					55					60				
Asp	Glu	Tyr	Val	Gln	Ser	Met	Asp	Gly	Arg	Leu	Gly	Asp	Lys	Cys	Trp
65					70				75						80
Phe	Phe	Gly	Phe	Leu											
				85											

<210> 251
 <211> 112
 <212> PRT
 <213> Bovine

Pro	Ile	Ile	Leu	Val	Gly	Asn	Lys	Ser	Asp	Leu	Val	Arg	Ser	Arg	Glu
1				5					10					15	
Val	Ser	Leu	Asp	Glu	Gly	Arg	Ala	Cys	Ala	Val	Val	Phe	Asp	Cys	Lys
			20					25					30		
Phe	Ile	Glu	Thr	Ser	Ala	Ala	Leu	His	His	Asn	Val	Gln	Ala	Leu	Phe
		35					40					45			
Glu	Gly	Val	Val	Arg	Gln	Ile	Arg	Leu	Arg	Arg	Asp	Ser	Lys	Glu	Ala
	50					55					60				
Asn	Ala	Arg	Arg	Gln	Ala	Gly	Thr	Arg	Arg	Arg	Glu	Ser	Leu	Gly	Lys
65				70					75						80
Lys	Ala	Lys	Arg	Phe	Leu	Gly	Arg	Ile	Val	Ala	Arg	Asn	Ser	Arg	Lys
				85					90					95	
Met	Ala	Met	Arg	Ala	Lys	Ser	Lys	Ser	Cys	His	Asp	Leu	Ser	Val	Leu
			100					105						110	

<210> 252
 <211> 111
 <212> PRT
 <213> Bovine

Gln	Lys	Cys	Ser	Lys	Gln	His	Ser	Glu	Ile	Arg	Glu	Asn	Leu	Ile	Thr
1				5					10					15	

Ala	Leu	Ser	Thr	Trp	Gln	Met	Phe	Ile	Val	Asp	Ile	Lys	Arg	Asn	Asn
			20					25					30		
Thr	Ala	Phe	Asp	Ile	Ile	Ala	Asp	Asn	Cys	Asp	Leu	His	Phe	Lys	Ile
		35					40					45			
Ser	Arg	Asp	Arg	Leu	Ser	Ala	Ser	Ser	Leu	Thr	Met	Glu	Ser	Phe	Ala
	50					55					60				
Phe	Leu	Trp	Ala	Gly	Gly	Arg	Ala	Ser	Tyr	Gly	Val	Ser	Lys	Gly	Lys
65					70					75					80
Val	Cys	Phe	Glu	Met	Lys	Val	Thr	Glu	Lys	Ile	Pro	Val	Arg	His	Leu
				85					90				95		
Tyr	Thr	Lys	Asp	Ile	Asp	Ile	Met	Lys	Phe	Gly	Leu	Gly	Gly	His	
			100					105					110		

<210> 253
 <211> 166
 <212> PRT
 <213> Bovine

<400> 253															
Tyr	Phe	Val	Thr	Asp	Tyr	Asp	Pro	Thr	Ile	Glu	Asp	Ser	Tyr	Thr	Lys
1				5					10					15	
Gln	Cys	Val	Ile	Asp	Asp	Arg	Ala	Ala	Arg	Leu	Asp	Ile	Leu	Asp	Thr
			20					25					30		
Ala	Gly	Gln	Glu	Glu	Phe	Gly	Ala	Met	Arg	Glu	Gln	Tyr	Met	Arg	Thr
		35					40					45			
Gly	Glu	Gly	Phe	Leu	Leu	Val	Ser	Ser	Val	Thr	Asp	Arg	Gly	Ser	Phe
	50					55					60				
Glu	Glu	Ile	Tyr	Lys	Phe	Gln	Arg	Gln	Ile	Leu	Arg	Val	Lys	Asp	Arg
65				70					75						80
Asp	Glu	Phe	Pro	Met	Ile	Leu	Ile	Gly	Asn	Lys	Ala	Asp	Leu	Asp	His
				85				90					95		
Gln	Arg	Gln	Val	Thr	Gln	Glu	Glu	Gly	Gln	Gln	Leu	Ala	Arg	Gln	Leu
			100					105					110		
Lys	Val	Thr	Tyr	Met	Glu	Ala	Ser	Ala	Lys	Ile	Arg	Met	Asn	Val	Asp
		115				120						125			
Gln	Ala	Phe	His	Glu	Leu	Val	Arg	Val	Ile	Arg	Lys	Phe	Gln	Glu	Gln
	130					135					140				
Glu	Cys	Pro	Pro	Ser	Pro	Glu	Pro	Thr	Arg	Lys	Gly	Lys	Arg	Gln	Glu
145					150					155					160
Arg	Leu	His	Cys	Val	Ile										
				165											

<210> 254
 <211> 76
 <212> PRT
 <213> Bovine

<400> 254															
Met	Ser	Lys	Ala	His	Pro	Pro	Glu	Leu	Lys	Lys	Phe	Met	Asp	Lys	Lys
1				5					10					15	
Leu	Ser	Leu	Lys	Leu	Asn	Gly	Gly	Arg	His	Val	Gln	Gly	Ile	Leu	Arg
			20					25					30		
Gly	Phe	Asp	Pro	Phe	Met	Asn	Leu	Val	Ile	Asp	Glu	Cys	Val	Glu	Met
		35					40					45			
Ala	Thr	Ser	Gly	Gln	Gln	Asn	Asn	Ile	Gly	Met	Val	Val	Ile	Arg	Gly
	50					55					60				
Asn	Ser	Ile	Ile	Met	Leu	Glu	Ala	Leu	Glu	Arg	Val				

65

70

75

<210> 255
 <211> 161
 <212> PRT
 <213> Bovine

<220>
 <221> VARIANT
 <222> (1)...(161)
 <223> Xaa = Any Amino Acid

<400> 255
 Met Ala Ala Arg Arg Asp Gly Trp Leu Gly Pro Ala Phe Gly Leu Arg
 1 5 10 15
 Leu Leu Leu Ala Thr Val Leu Gln Thr Val Ser Ala Leu Gly Ala Glu
 20 25 30
 Phe Ser Ser Glu Ser Cys Arg Glu Leu Gly Phe Ser Ser Asn Leu Leu
 35 40 45
 Cys Ser Ser Cys Asp Leu Leu Gly Gln Phe Asn Leu Leu Gln Leu Asp
 50 55 60
 Pro Asp Cys Arg Gly Cys Cys Gln Glu Glu Ala Gln Phe Glu Thr Lys
 65 70 75 80
 Lys Leu Tyr Ala Gly Ala Ile Leu Glu Val Cys Xaa Lys Leu Gly Arg
 85 90 95
 Phe Pro Gln Val Gln Ala Phe Val Arg Ser Asp Lys Pro Lys Leu Phe
 100 105 110
 Lys Gly Leu Gln Ile Lys Tyr Val Arg Gly Ser Asp Pro Val Leu Lys
 115 120 125
 Leu Leu Asp Asp Ser Gly Asn Ile Ala Glu Glu Leu Ser Ile Leu Lys
 130 135 140
 Trp Asn Thr Asp Ser Val Glu Glu Phe Leu Ser Glu Lys Leu Glu Arg
 145 150 155 160
 Ile

<210> 256
 <211> 94
 <212> PRT
 <213> Bovine

<400> 256
 Lys Thr Asp Met Phe Gln Thr Val Asp Leu Phe Glu Gly Lys Asp Leu
 1 5 10 15
 Ala Ala Val Gln Arg Thr Leu Met Ala Leu Gly Ser Leu Ala Val Thr
 20 25 30
 Lys Asn Asp Gly His Tyr Arg Gly Asp Pro Asn Trp Phe Met Lys Lys
 35 40 45
 Ala Gln Glu His Lys Arg Glu Phe Thr Glu Ser Gln Leu Gln Glu Gly
 50 55 60
 Lys His Val Ile Gly Leu Gln Met Gly Ser Asn Arg Gly Ala Ser Gln
 65 70 75 80
 Ala Gly Met Thr Gly Tyr Gly Arg Pro Arg Gln Ile Ile Ser
 85 90

<210> 257
 <211> 101

<212> PRT
<213> Bovine

<400> 257

Val	Pro	Thr	Met	Val	Thr	Arg	Gly	Gln	Asp	Val	Gly	Arg	Tyr	Gln	Val
1				5					10					15	
Ser	Trp	Ser	Leu	Asp	His	Lys	Ser	Ala	His	Ala	Gly	Thr	Tyr	Glu	Val
			20					25					30		
Arg	Phe	Phe	Asp	Glu	Glu	Ser	Tyr	Ser	Leu	Leu	Arg	Lys	Ala	Gln	Arg
			35				40					45			
Asn	Asn	Glu	Asp	Val	Ser	Val	Ile	Pro	Pro	Leu	Phe	Thr	Val	Ser	Val
	50					55					60				
Asp	His	Arg	Gly	Thr	Trp	Asn	Gly	Pro	Trp	Val	Ser	Thr	Glu	Val	Leu
65					70					75					80
Ala	Ala	Ala	Ile	Gly	Leu	Val	Ile	Tyr	Tyr	Leu	Ala	Phe	Ser	Ala	Lys
				85					90					95	
Ser	His	Ile	Gln	Ala											
				100											

<210> 258
<211> 105
<212> PRT
<213> Bovine

<400> 258

Ser	Phe	Arg	Asp	Ile	Tyr	Phe	Asp	Thr	Leu	Asn	Glu	Asp	Leu	Phe	Gln
1				5					10					15	
Lys	Ile	Leu	Val	Pro	Ile	Gln	Gln	Val	Leu	Lys	Glu	Gly	His	Leu	Glu
			20					25					30		
Lys	Thr	Glu	Ile	Asp	Glu	Val	Val	Leu	Val	Gly	Gly	Ser	Thr	Arg	Ile
			35				40					45			
Pro	Arg	Ile	Arg	Gln	Val	Ile	Gln	Glu	Phe	Phe	Gly	Lys	Asp	Pro	Asn
	50					55					60				
Thr	Ser	Val	Asp	Pro	Asp	Leu	Ala	Val	Val	Thr	Gly	Val	Ala	Ile	Gln
65					70					75					80
Ala	Gly	Ile	Asp	Gly	Gly	Ser	Trp	Pro	Leu	Gln	Val	Ser	Ala	Leu	Glu
				85					90					95	
Ile	Pro	Asn	Lys	His	Leu	Gln	Lys	Thr							
			100					105							

<210> 259
<211> 128
<212> PRT
<213> Bovine

<400> 259

Gly	Thr	Trp	Asp	Ser	Phe	Leu	Glu	Lys	Phe	Met	Ala	Gly	Glu	Val	Cys
1				5					10					15	
Tyr	Gly	Ser	Trp	Tyr	Gln	His	Val	His	Glu	Trp	Trp	Glu	Leu	Ser	His
			20					25					30		
Thr	His	Pro	Val	Leu	Tyr	Leu	Phe	Tyr	Glu	Asp	Ile	Met	Glu	Asp	Pro
			35				40					45			
Lys	Arg	Glu	Ile	Gln	Lys	Ile	Leu	Glu	Phe	Ile	Gly	Arg	Ser	Leu	Pro
	50					55					60				
Glu	Glu	Thr	Val	Asp	His	Ile	Val	Gln	Arg	Pro	Tyr	Pro	Leu	Gln	Ser
65					70				75						80
Trp	Thr	Thr	Ser	Ile	Ser	Ser	Phe	Met	Arg	Lys	Gly	Ile	Thr	Gly	Asp

				85					90					95			
Trp	Lys	Ser	Thr	Phe	Thr	Val	Ala	Gln	Asn	Glu	Leu	Phe	Glu	Ala	His		
			100					105					110				
Tyr	Ala	Lys	Lys	Met	Arg	Ala	Ala	Ser	Phe	Arg	Phe	Arg	Trp	Lys	Leu		
		115					120					125					

<210> 260
 <211> 76
 <212> PRT
 <213> Bovine

<400> 260																	
Gln	Lys	Lys	Ala	Ser	Ala	Ser	Ala	Gly	Arg	Ile	Thr	Val	Pro	Arg	Leu		
1				5					10					15			
Ser	Val	Gly	Ser	Val	Thr	Ser	Arg	Pro	Ser	Thr	Pro	Thr	Leu	Gly	Thr		
			20					25					30				
Pro	Thr	Pro	Pro	Ala	Met	Ser	Val	Ser	Thr	Lys	Val	Gly	Thr	Pro	Val		
		35					40					45					
Ser	Leu	Thr	Gly	Gln	Arg	Phe	Thr	Val	Gln	Met	Pro	Thr	Ser	Gln	Ser		
	50					55					60						
Pro	Ala	Val	Lys	Ala	Ser	Ile	Pro	Ala	Thr	Ser	Ala						
65					70				75								

<210> 261
 <211> 169
 <212> PRT
 <213> Bovine

<400> 261																	
Met	Ala	Ala	Val	Lys	Thr	Leu	Asn	Pro	Lys	Ala	Glu	Val	Ala	Arg	Ala		
1				5					10					15			
Gln	Ala	Ala	Leu	Ala	Val	Asn	Ile	Ser	Ala	Ala	Arg	Gly	Leu	Gln	Asp		
			20					25					30				
Val	Leu	Arg	Thr	Asn	Leu	Gly	Pro	Lys	Gly	Thr	Met	Lys	Met	Leu	Val		
		35					40					45					
Ser	Gly	Ala	Gly	Asp	Ile	Lys	Leu	Thr	Lys	Asp	Gly	Asn	Val	Leu	Leu		
	50					55					60						
His	Glu	Met	Gln	Ile	Gln	His	Pro	Thr	Ala	Ser	Leu	Ile	Ala	Lys	Val		
65					70					75					80		
Ala	Thr	Ala	Gln	Asp	Asp	Ile	Thr	Gly	Asp	Gly	Thr	Thr	Ser	Asn	Val		
			85						90					95			
Leu	Ile	Ile	Gly	Glu	Leu	Leu	Lys	Gln	Ala	Asp	Leu	Tyr	Ile	Ser	Glu		
			100					105					110				
Gly	Leu	His	Pro	Arg	Ile	Ile	Thr	Glu	Gly	Phe	Glu	Ala	Ala	Lys	Glu		
		115				120						125					
Lys	Ala	Leu	Gln	Phe	Leu	Glu	Gln	Val	Lys	Val	Ser	Lys	Glu	Met	Asp		
	130					135					140						
Arg	Glu	Thr	Leu	Ile	Asp	Val	Ala	Arg	Thr	Ser	Leu	Arg	Thr	Lys	Val		
145					150					155					160		
His	Ala	Glu	Leu	Ala	Asp	Val	Leu	Thr									
				165													

<210> 262
 <211> 198
 <212> PRT
 <213> Bovine

<400> 262

Lys	Met	Ser	Asp	Met	Glu	Asp	Asp	Phe	Met	Cys	Asp	Asp	Glu	Glu	Asp
1				5					10					15	
Tyr	Asp	Leu	Glu	Tyr	Ser	Glu	Asp	Ser	Asn	Ser	Glu	Pro	Asn	Val	Asp
			20					25					30		
Leu	Glu	Asn	Gln	Tyr	Tyr	Asn	Ser	Lys	Ala	Leu	Lys	Glu	Asp	Asp	Pro
		35				40						45			
Lys	Ala	Ala	Leu	Ser	Ser	Phe	Gln	Lys	Val	Leu	Glu	Leu	Glu	Gly	Glu
	50					55					60				
Lys	Gly	Glu	Trp	Gly	Phe	Lys	Ala	Leu	Lys	Gln	Met	Ile	Lys	Ile	Asn
65					70					75					80
Phe	Lys	Leu	Thr	Asn	Phe	Pro	Glu	Met	Met	Asn	Arg	Tyr	Lys	Gln	Leu
			85						90					95	
Leu	Thr	Tyr	Ile	Arg	Ser	Ala	Val	Thr	Arg	Asn	Tyr	Ser	Glu	Lys	Ser
			100					105					110		
Ile	Asn	Ser	Ile	Leu	Asp	Tyr	Ile	Ser	Thr	Ser	Lys	Gln	Asn	Ser	Asp
		115				120						125			
Phe	Leu	Cys	Gln	Met	Asp	Leu	Leu	Gln	Glu	Phe	Tyr	Glu	Thr	Thr	Leu
	130					135					140				
Glu	Ala	Leu	Lys	Asp	Ala	Lys	Asn	Asp	Thr	Leu	Trp	Phe	Lys	Thr	Asn
145					150					155					160
Thr	Lys	Leu	Gly	Lys	Leu	Tyr	Leu	Glu	Arg	Glu	Glu	Tyr	Gly	Lys	Leu
			165					170						175	
Gln	Lys	Ile	Leu	Arg	Gln	Leu	His	Gln	Ser	Cys	Gln	Thr	Asp	Asp	Gly
			180					185					190		
Glu	Asp	Asp	Leu	Lys	Lys										
		195													